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PHILIP B. KENNEDY, Director.

MISCELLANEOUS SERIES—No. 84

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VOLUME 1

BY

JULEAN ARNOLD
Commercial Attaché
And
VARIOUS AMERICAN CONSULAR OFFICERS

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LETTER OF SUBMITTAL.

DEPARTMENT OF COMMERCE,
BUREAU OF FOREIGN AND DOMESTIC COMMERCE,
Washington, August 2, 1919.

SIR: There is submitted herewith a Commercial Handbook of China, prepared under the supervision of Julean Arnold, United States commercial attaché at Peking. The Bureau of Foreign and Domestic Commerce realizes keenly the desirability of an immediate, vigorous, and sytematic effort to promote American trade with this great friendly nation in the east of Asia. Such an effort, to attain the object sought, must be comprehensively conceived and thoroughly thought out. It must be based, therefore, on the most recent and dependable economic information. To supply that information is the purpose of the handbook.

This handbook, the most detailed publication of its kind ever issued by the Department of Commerce, will appear in two volumes. The present, or first, volume consists of an introductory chapter by Commercial Attaché Arnold, another chapter containing a mass of statistics on the trade of China as a whole, and 17 chapters covering the American consular districts in the Republic. After careful consideration it was decided that the division of China by consular districts was more practicable and more advantageous than any other method, since the information is designed solely for the benefit of American business men, with whom the consular service will at all times cooperate in the advancement of American trade in China. The Bureau of Foreign and Domestic Commerce desires to express its warm appreciation of the very generous and painstaking way in which all the representatives of the United States Government in China have contributed to the success of the book.

The chapters covering the consular districts have each been prepared in accordance with a uniform plan, which will be readily apparent upon an examination of the table of contents. The consular reports discuss area and population, physiography and climate, administration, education, agriculture, mining, communications, public works, ports and concessions, finance, industry, shipping and traveling facilities, commercial organizations, and other related aspects of trade. Every effort has been exerted to make the data concretely practical and useful. Special attention has been given to the matter of bringing all figures and specific statements of fact as nearly up to date as is possible with the information at hand. The diligence and responsiveness of the consuls have enabled the Bureau to accomplish much toward that end. It need scarcely be stated that many difficulties are inevitably encountered in the effort to collect full and accurate statistical data regarding Chinese conditions and activities.

Volume 2 will contain chapters on the Chinese system of government; Chinese history and American relations; judicial procedure; trade-marks, patents, and copyrights; tariffs and internal taxes; currency, exchange, and banking; concessions and titles; weights and measures; guilds and chambers of commerce; the position of the comprador; Chinese products of interest to American manufacturers and importers; China's industrial and commercial progress and prospects; advertising in China; labor and living conditions; land values; Chinese customs and etiquette; and numerous other subjects of interest to American business men having transactions with the Far Eastern markets.

It is the earnest hope of the Bureau that this handbook, bringing together the most recent information concerning trade movements in the great Oriental Republic, will serve to create among the exporters of the United States a more effective interest in the Chinese field. It is felt that the book will afford them an ample opportunity to become familiar with the basic trade potentialities of that important and wonderfully interesting country.

Respectfully,

PHILIP B. KENNEDY,
Director of Bureau.

To Hon. WILLIAM C. REDFIELD,
Secretary of Commerce.

COMMERCIAL HANDBOOK OF CHINA: VOLUME I.

BRIEF GEOGRAPHICAL DESCRIPTION AND SUMMARY OF CONDITIONS.

By Commercial Attaché Julean Arnold.

RELATIVE POSITION OF CHINA.

The distance from the coast of China to the coast of California is about equivalent to twice the distance from San Francisco to New York.

The northern latitude of China's territory corresponds with a line running through southern Canada, and the southern latitude with a line traversing southern Mexico. From east to west China's territory extends over a distance similar to that between the Atlantic and Pacific coasts of the United States.

AREA AND POPULATION.

Since China has not yet carried out a proper land survey or census, the area and population of its territory can be given only as estimates, as in the following table (figures for certain other countries are added for purposes of comparison):

Regions.	Area.	Population.	Density of population.
	Square miles.		*Per sq. mi.*
China proper, exclusive of three Manchurian provinces	1,533,000	336,271,000	219
Manchuria	364,000	14,917,000	41
Mongolia	1,370,000	2,500,000	2
Chinese Turkestan	550,000	1,200,000	2
Tibet	460,000	6,500,000	14
Total, Chinese territory	4,277,000	361,388,000	84
South America	6,850,000	35,000,000	5
United States, exclusive of dependencies	3,620,000	100,000,000	33
Japanese Empire	260,000	70,000,000	270
France (continental)	207,000	40,000,000	150

The population of the great Yangtze Basin is estimated at 200,000,000. Two-thirds of China's population is concentrated in one-third its area, being densest along rivers and in coastal regions. The three Manchurian Provinces and Mongolia and Turkestan offer vast areas of fertile lands and mineral wealth for development and settlement, but lack of adequate means of transportation and protection against brigandage have discouraged the settlement of these sections of the country by Chinese from the more densely populated areas of China proper.

With the exception of the area comprising the great central plain (about 200,000 square miles, or three-fifths the area of the original 13

American States), formed by the valleys of the Yellow and Yangtze Rivers, China proper is mountainous or hilly.

China is probably one of the best watered countries on the face of the globe. The Yangtze River, about 3,200 miles long, and the Yellow River, about 2,600 miles, rise in Tibet and flow east across North and Central China, emptying into the Pacific. The West River, about 1,200 miles long, rises in the Yunnan Plateau in southeastern China and flows east through South China into the Pacific. In addition to these, there are numerous canals and small streams, especially in the south.

CLIMATE.

Climatically, China may be said to enjoy two distinct seasons, summer and winter, with short autumn and spring seasons.

At Tientsin or Peking, which are in the same latitude as San Francisco and Washington, the thermometer falls to 4° F. and rises in summer to 100° F.

At Shanghai, which lies in a latitude between that of San Diego and New Orleans, the winter temperature reaches 15° F. and the summer temperature 98° F.

At Canton, which lies in the same latitude as Habana, Cuba, the temperature rarely falls in the winter below 32° F. and rises in the summer to a maximum of about 98° F.

Generally speaking, considerable rain falls in China during the spring and summer months. The winters in the north are dry and cold, often with no rainfall between the months of November and April. The winters of the central or Yangtze River region are cold and damp, while those of the south are comparatively dry and mild. The autumn season is, generally speaking, pleasant throughout China. In the north dust storms are common during the spring months.

The average annual rainfall in the north averages 25 inches, in the Yangtze region 44 inches, and in Kwangtung in the south 70 inches.

DISTANCES.

Following is a table of distances from Shanghai, the commercial metropolis of China, to nine important cities:

Shanghai to—	Traveling time.		Miles.	Corresponding distance in United States: New York to—
	Days.	Hours.		
Peking		38	830	Indianapolis.
Hongkong	2½- 3		900	Chicago.
Hankow	3		600	Cleveland.
Chungking	14-25		1,425	Omaha.
Nagasaki		30	410	Augusta, Me.
Vladivostok	4		1,000	Milwaukee.
Kobe	3		750	Cincinnati.
Yokohama	5		1,100	Tampa, Fla.
New York	22-30		9,920	

STATISTICS RELATING TO PROVINCES AND CITIES.

The following tables give certain essential data concerning the Provinces of China and the important cities of the Far East:

PROVINCES OF CHINA.

Province.	Area.	Population according to Minchengpu census, 1910.	Population per square mile.	Capital of Province.
	Square miles.			
Anhwei	54,826	17,300,000	315	Anking.
Chekiang	36,680	17,000,000	463	Hangchow.
Chihli	115,830	32,571,000	281	Paoting.
Fukien	46,332	13,100,000	282	Foochow.
Honan	67,954	25,600,000	376	Kaifeng.
Hunan	83,398	23,600,000	282	Changsha.
Hupeh	71,423	24,900,000	348	Wuchang.
Kansu	125,483	5,000,000	40	Lanchow.
Kiangsi	69,498	14,500,000	208	Nanchang.
Kiangsu	38,610	17,300,000	448	Nanking.
Kwangsi	77,220	6,500,000	84	Kweilin.
Kwangtung	100,000	27,700,000	277	Canton.
Kweichow	67,182	11,300,000	168	Kweiyang.
Shansi	81,853	10,000,000	122	Taiyuan.
Shantung	55,984	29,600,000	528	Tsinan.
Shensi	75,290	8,800,000	116	Sian.
Szechwan	218,533	43,000,000	205	Chengtu.
Yunnan	146,714	8,500,000	58	Yunnan.
Shengking (Manchuria)	363,700	14,917,000	41	Mukden.
Kirin (Manchuria)				Kirin.
Heilungkiang (Manchuria)				Aigun.
Total	1,893,515	351,188,000	174	
Sinkiang		2,491,000		
Manchu military organization		1,700,000		
Dependencies		760,000		
Tibet (Chinese estimate)		6,500,000		
Grand total		362,639,000		

IMPORTANT CITIES OF THE FAR EAST.

Name of city.	Province or country.	Population.				
		Total.	Foreign.			
			In city.		In consular district.	
			European and American.	American.	European and American.	American.
Amoy	Fukien	150,000	179	51	250	81
Antung	Manchuria	20,000			67	10
Bankok	Siam	630,000	2,000			
Calcutta	India	1,225,700				
Canton	Kwangtung	1,500,000	800	250		575
Changsha	Hunan	500,000	185	80	507	224
Chefoo	Shantung	65,000	313	49	1,000	325
Chungking	Szechwan	300,000	140	40		180
Dairen	Manchuria	58,000	91	6		
Foochow	Fukien	600,000			523	221
Hakodate	Japan	100,000	119	39		
Hankow. {Hanyang Wuchang Hankow}	Hupeh	1,500,000	1,607	200		561
Harbin	Manchuria	100,000	a 55,775	75	a 75,000	75
Hongkong	British colony	460,000	7,750	250		
Kelung (Taihoku)	Formosa	50,000	45	8	79	10
Kobe	Japan	450,000			1,500	350
Manila	Philippine Islands	350,000	5,912	5,474		8,539
Mukden	Manchuria	125,000	150	21		40
Nagasaki	Japan	162,000				
Nanking	Kiangsu	200,000	234	150		
Saigon	French Indo-China	200,000	3,500			
Seoul	Chosen	300,000	257	127	1,108	700
Shanghai	Kiangsu	1,200,000	13,596	1,720		2,213
Swatow	Kwangtung	31,000				
Tientsin	Chihli	1,000,000		276	9,646	978
Peking	do	700,000		405		
Tokyo	Japan	2,000,000				
Tsingtau	Shantung	53,000	474	23	474	28
Vladivostok	Siberia	115,000	85,000	50		
Yokohama	Japan	397,000	2,140	382	3,175	854

a Including Russians.

The following sections give brief summaries of general conditions in all the Provinces and outlying dependencies of China. The areas and populations are estimated. The reader will find *detailed* descriptions of these regions in the 17 chapters (representing the American consular districts in China) that form the body of the present volume.

PROVINCE OF ANHWEI.[1]

Area.—55,000 square miles.

Population[2].—20,000,000; 360 per square mile; densest in north.

Topography.—South of Yangtze, mountainous; central section, fertile, well-watered plain; north of Hwai River, plains subject to droughts and inundations.

Agriculture.—Rice, cotton, wheat, and tea are raised. The central section exports large quantities of rice; the north wheat, beans, sorghum, tobacco, and millet; the south tea and silk exclusively.

Minerals.—Coal is widely distributed, but is of low quality. Iron deposits are large and of good quality.

Industries.—Anhwei supplies a large proportion of China's native ink. Native paper is produced abundantly in the south. Wuhu has several modern rice and flour mills and is destined to become an important industrial city.

Communications.—Rivers: Yangtze (ocean-going steamers), Hwai, and tributaries. Railways: Tientsin-Pukow line through northeastern sections; projected line from Wuhu southwest to Nanchang in Kiangsi. Post offices, 79. Telegraph stations, 27.

Cities.—Of more than 100,000 population: Anking (capital), Wuhu, Pochow. Other important cities: Tatung, Hweichow, and Luchowfu.

Treaty port.—Wuhu.

Language and characteristics of natives.—Mandarin is spoken. The natives are simple, hardworking, and peaceable.

American interests.—Under jurisdiction of Nanking consulate.

PROVINCE OF CHEKIANG.

Area.—37,000 square miles.

Population.—17,000,000; 460 per square mile; densest in north and northeast.

Topography.—South and west mountainous; large fertile plains in the north; rich agriculturally.

Agriculture.—Rice, tea, silk, cotton, wheat, hemp, indigo, sugar, and fruits are produced. Rice is the principal crop. Tea is grown in hills. Silk produces two crops, for which the Province is noted. Cotton is increasing in importance, the districts between Shaohing and Ningpo producing an excellent quality in abundance.

Minerals.—There are iron, coal, alum, and soapstone deposits, but they are little developed.

Industries.—Silk forms the leading industry. Huchow produces the best raw silk and Hangchow the best silk cloth. There are two cotton mills with 50,000 spindles for the manufacture of cotton yarn. Kashing is noted for its brass and copper ware. Fans, umbrellas, joss paper, and Chinese pens (brushes) are made in large quantities in Hangchow. Shaohing produces China's best samshu (rice wine), of which it shipped 6,000 tons in 1916. The soapstone ware of Wenchow is famous.

Communications.—Waterways: The Province is a network of rivers, canals, and creeks, navigable by native craft. There is a steamer service between Shanghai, Ningpo, and Wenchow. Railways: Shanghai-Hangchow-Ningpo; projected, Hangchow-Wuhu and Ningpo-Wenchow. Post offices, 73. Telegraph stations, 34.

Cities.—Of more than 500,000 population: Hangchow (capital). More than 100,000: Shaohing, Ningpo, Huchow. Other important cities: Lanchi, Kashing, Chuchow, Kinhwafu.

Treaty ports.—Hangchow, Ningpo, Wenchow.

Language and characteristics of natives.—A form of Mandarin is spoken. The natives are enterprising; they are splendid seamen.

American interests.—Under the jurisdiction of the Shanghai consulate general.

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[1] Pronounced "Anwhay."

[2] The estimates of population given in these brief descriptive sections are not precisely the same as the figures of the Minchengpu "census" of 1910, nor do they correspond in every instance with the figures furnished by the consuls in the later chapters of this book. Since all statistics purporting to show the population of Chinese Provinces and cities are merely rough estimates, it has not been considered necessary, in this case, to adhere rigidly to unvarying figures. Where differences occur they may be regarded as representing divergent opinions.

PROVINCE OF CHIHLI.[1]

Area.—116,000 square miles.

Population.—30,000,000; 250 per square mile; densest in plain toward the southwest.

Topography.—Mountainous in north and west; great eastern plain is hot and very productive in summer, but cold and subject to dust storms in winter, with streams frozen.

Agriculture.—Sorghum, millet, wheat, Indian corn, beans, and peanuts constitute the main crops. Wheat is sown in the late fall and harvested in early summer, after which the other crops are planted, corn and beans being planted in the same fields. Other products are hemp, cotton, fruits, vegetables, and walnuts. The cotton is grown in the south, in short staple, and finds a ready market in America.

Minerals.—There are deposits of coal (anthracite and bituminous), limestone, and salt. The Province is particularly rich in high-class coal, with a number of large mines worked by modern machinery and methods.

Industries.—Tientsin is a great export and import center. There are nine wool-cleaning works, besides hydraulic presses for wool, jute, skins, rugs, and hides, in preparation for export; these are under foreign management. Soap, candle, match, and cigarette factories with modern machinery and two modern cotton-yarn mills with 25,000 spindles each are among the industries of Tientsin. More than 1,000 tons of pigs' bristles are exported annually from North China. A cement plant produces 600,000 barrels annually. The coal mines and railway shops at Tangshan are big industries. Tientsin is the export center for North China.

Communications.—Waterways: Pei Ho (river) and Grand Canal, navigable for small boats. Railways: Peking-Mukden, Tientsin-Pukow, Peking-Kalgan, Peking-Hankow, and Peking-Mentowkow. Post offices, 191. Telegraph stations, 76.

Cities.—Of more than 500,000 population: Tientsin, Peking (national capital). More than 100,000: Paotingfu.

Treaty ports.—Tientsin, Kalgan, Kweihwacheng, Hulutao, Chihfeng, Dolon-nor, and Chinwangtao.

Language and characteristics of natives.—Northern Mandarin is spoken. The natives include Chinese, Mongols, and Manchus with predominance of Tartar blood.

American interests.—Under jurisdiction of Tientsin consulate general. American Legation at Peking has jurisdiction over whole of China.

PROVINCE OF FUKIEN.[2]

Area.—46,000 square miles.

Population.—13,000,000; 280 per square mile; densest along coast and in Min River Valley.

Topography.—The Province is mountainous, the mountains running parallel with the coast. The coast is broken with many bays and three good harbors, Santuao, Foochow, and Amoy. The climate is semitropical.

Agriculture.—Rice, tea, wheat, sugar, bamboo, oranges, and camphor are the principal products.

Minerals.—Coal, iron, and potter's clay are the principal mineral products, though there are deposits of iron ore and coal that have not been developed.

Industries.—Foochow poles from the Foochow hinterland are exported in large quantities. The leading native industry is the manufacture of paper from bamboo pulp. The tea industry has dwindled from a position of first importance. Wanyao manufactures pottery on a large scale. Foochow lacquer is famous throughout China. The sugar industry is important, but there are only six small modern mills; it is capable of large development. There are two fruit canneries at Amoy with modern equipment. The camphor industry is gradually dying away, because of scarcity of trees. There is a large emigration of natives to Taiwan (Formosa), the Philippines, and Singapore.

Communications.—Waterways: Coastwise trade, Amoy, Foochow, and Santuao connected with Shanghai and Hongkong; Min River navigable for small boats beyond Yenpingfu. Railways: Amoy-Changchow, under construction. Goods generally carried on backs of coolie carriers. Post offices, 75. Telegraph stations, 16.

Cities.—Of more than 500,000 population: Foochow (capital). More than 100,000: Amoy. Other large cities: Changchowfu and Chuanchowfu. There are 22 other cities with populations of more than 20,000.

Treaty ports.—Amoy, Foochow, and Santuao.

Language and characteristics of natives.—The Amoy, Foochow, Shaowu, and Southern Mandarin are the principal dialects. The natives are independent and adventurous.

American interests.—Under jurisdiction of Foochow consulate for North Fukien and Amoy consulate for South Fukien.

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[1] Pronounced "Jeerhlee."

[2] Pronounced "Fookee-en."

PROVINCE OF HONAN.[1]

Area.—68,000 square miles.

Population.—25,000,000; 375 per square mile; slightly denser in north.

Topography.—Hilly on western boundary, with plains elsewhere; floods of Yellow River a constant menace; climate fairly severe; soil fertility good.

Agriculture.—Cotton, wheat, sorghum, beans, millet, sesame seed, and Indian corn are the principal products. The Province is noted particularly for cotton and sesame seed.

Minerals.—Coal and iron are the principal minerals. The Peking Syndicate operates extensive coal-mining properties in Honan.

Industries.—Coal mining and brick kilns constitute the main industries. Honan pongees form a considerable industry. Otherwise the Province is agricultural.

Communications.—Waterways: Of the three rivers, Yellow, Hwai, and Wei, only the first-named is navigable and that only in sections. Railways: Peking-Hankow, Kaifeng-Hsuchowfu, and Kaifeng-Shensi via Honanfu and Tungkwan. Extensive cart traffic over poor country roads. Post offices, 87. Telegraph stations, 31.

Cities.—Of more than 100,000 population: Kaifengfu (capital). Twelve cities with populations exceeding 20,000.

Treaty ports.—None.

Language and characteristics of natives.—Mandarin is spoken. There are few immigrants from other Provinces and few native tribes.

American interests.—Under jurisdiction of Tientsin consulate general for region north of Yellow River and Hankow consulate general for territory south of river.

PROVINCE OF HUNAN.[2]

Area.—83,000 square miles.

Population.—24,000,000; 280 per square mile; densest in river valleys and around Tung Ting Lake.

Topography.—Mountainous, especially in west and south; Tung Ting Lake (75 by 60 miles) in northeast, four rivers emptying into it; plains south of Changsha.

Agriculture.—Probably no Province surpasses Hunan in agricultural wealth. Rice is the main crop. Tea, beans, ramie, sesame, bamboo, wood oil, vegetable tallow, and wheat are among its products. It also produces excellent pork.

Minerals.—There is abundant mineral wealth. Antimony, lead, zinc, coal, iron, manganese, tin, and quicksilver are the principal minerals. Hunan produces a large proportion of the world's supply of antimony. The iron, lead, coal, zinc, and tin deposits are actively worked and are productive of much wealth.

Industries.—Mining is the main industry. Native paper from bamboo pulp, grass cloth, silk embroideries, and cotton nankeens are extensively manufactured. Hunan hams are shipped all over China. Bamboo manufactures are noted. Changsha is developing into an industrial center.

Communications.—Waterways: Steamer traffic on lake and between Changsha and Hankow; Siang, Li, and Yuan Rivers navigable, except during low-water season in winter. Railways: Changsha is connected by rail with Hankow and will be connected in a few years with Canton. Hunan is connected by roads with neighboring Provinces. Post offices, 57. Telegraph stations, 36.

Cities.—Of more than 100,000 population: Changsha (capital), Changteh, and Siangtan. No other large cities.

Treaty ports.—Changsha and Yochow.

Language and characteristics of natives.—The local Mandarin dialect is spoken. The natives are progressive and militant; they were formerly antiforeign.

American interests.—Under jurisdiction of Changsha consulate.

PROVINCE OF HUPEH.[3]

Area.—71,000 square miles.

Population.—25,000,000; 350 per square mile; densest on the plain.

Topography.—It is said of Hupeh that it is three parts hills, six parts water, and one part habitable land. The Yangtze and Han Rivers intersect the Province, as well as numerous lakes and canals.

Agriculture.—Rice, cotton, tea, and beans form the principal crops. Sesame, tobacco, wheat, ramie, and silk are also important products. Eggs and egg products, nutgalls, vegetable and animal tallows figure in the export trade of Hupeh.

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[1] Pronounced "Hōnan."
[2] Pronounced "Hoonan."
[3] Pronounced "Hoobay."

Minerals.—Iron and coal are the main minerals. The Tayeh Iron Mines of Hupeh are the largest in China.

Industries.—Iron and steel production is very important. Hankow is called the "Chicago of China." It is a great collection and distribution center. Cotton mills, ore refineries, flour mills, iron works, oil mills, egg-products plants, cigarette factories, and cement plants are among its industries. Hankow is the center of the tea industry in China. The Province produces enormous quantities of fish. With Tientsin Hankow shares the bulk of the hide export trade. It is the principal export center for sesame, wood oil, cotton, egg products, hides, vegetable tallow, vegetable oils, and nutgalls.

Communications.—Waterways: Ocean-going steamers to Hankow eight months in the year; river traffic between Hankow and upper Yangtze, Hankow and Changsha, and Hankow and Laohokow (on Han River). Railways: Peking-Hankow, Wuchang-Changsha (to be completed later to Canton). Provincial roads many, but in poor condition. Post offices, 90. Telegraph stations, 39.

Cities.—Hankow, Wuchang, and Hanyang, the three "Han cities," have a combined population of 1,500,000. Hupeh has six other cities with more than 25,000 population.

Treaty ports.—Hankow, Ichang, Shasi.

Language of natives.—Mandarin is spoken. There are but few immigrants in the Province.

American interests.—Under jurisdiction of Hankow consulate general.

PROVINCE OF KANSU.[1]

Area.—125,000 square miles.

Population.—5,000,000; 40 per square mile; most sparsely populated Province.

Topography.—Mountains cross Kansu northwest to southeast; south very mountainous, east and northeast large, fertile, loess plateau, north wild and uninhabitable; climate dry, with cold, dry winters.

Agriculture.—Wheat, cotton, rhubarb, licorice root, tobacco, and fruits are the principal products. The Province is pastoral rather than agricultural, and sheep and cattle are raised.

Minerals.—Little is known regarding the mineral wealth.

Industries.—Tobacco, wool, and sheep raising constitute the main industries.

Communications.—Waterways: Tributaries of Yellow River navigable during summer season for short distances for small boats. No railways. Country roads adapted to cart traffic. Post offices, 21. Telegraph stations, 18.

Cities.—Lanchowfu (capital), population 500,000. Other important cities: Tsinchow, Siningfu, Liangchow.

Treaty ports.—None.

Language and characteristics of natives.—Western Mandarin is spoken. The people are mostly illiterate. A large number are Mohammedans. There are some Mongols in the north.

American interests.—Under jurisdiction of Hankow consulate general.

PROVINCE OF KIANGSI.[2]

Area.—68,000 square miles.

Population.—15,000,000; 210 per square mile; densest around Poyang Lake and in Kan Valley.

Topography.—Mountainous, except Poyang Lake basin; country around lake, marshy; Kan River drains larger part of Province; climate humid.

Agriculture.—Rice, tea, tobacco, bamboo, peanuts, fruits, indigo, and grains are the main products. Camphor trees are found in many places. Ramie is quite extensively grown.

Minerals.—There are deposits of coal, kaolin, and copper. It is estimated that the Pinghsiang coal mines, producing a million tons a year, could continue production for several hundred years.

Industries.—Coal mining and the manufacture of coke and briquettes constitute a great industry at Pinghsiang, where modern machinery and methods are employed. The porcelain industry of Kiangsi is far famed. About one-half of China's production of grass cloth is made in Kiangsi.

Communications.—Waterways: Steamers through Poyang Lake and Kan River to Nanchang; Kan River and tributaries navigable for native boats. Railways: Kiukiang-Nanchang, Pinghsiang-Chuchow; line projected from Nanchang to Santuao or Swatow. The country roads are poor, most of the traffic being by water. Seventy or 80 walled cities can be reached by boat the greater part of the year. Post offices, 85.

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[1] Pronounced "Gonsoo." [2] Pronounced "Geeongsee" in the north and "Keeongsee" in the south.

Cities.—Of more than 100,000 population: Nanchang (capital), Kanchow, Kianfu, and Kingtehchen. Six other cities of more than 25,000.

Treaty port.—Kiukiang.

Language of natives.—Mandarin, except in the east, where a dialect of Fukienese is spoken.

American interests.—Under the jurisdiction of the Hankow consulate general.

PROVINCE OF KIANGSU.[1]

Area.—37,000 square miles.

Population.—18,000,000; 450 per square mile; densest on Haimen promontory and Tsungming Island.

Topography.—Great alluvial plain, south comprising portion of Yangtze delta, 120 by 60 miles; land low lying, abounding in swamps and lagoons; noted for fertility.

Agriculture.—Silk, cotton, rice, beans, peanuts, wheat, bamboo, vegetables, and fruits are the main products. Wusih enjoys the reputation of producing the finest silk in the world. Cotton is being produced in larger quantities each year.

Minerals.—The Province is poor in minerals.

Industries.—The greatest development has been in the cotton industry. There are 25 to 30 mills with a total of a million spindles operating at Shanghai. The number of looms is increasing and promises rapid development also. Flour mills, oil mills, egg-products plants, rice mills, furniture factories, glass works, ice and cold-storage plants, match factories, paper mills, electric lamp factories, chemical works, shipbuilding and engineering works, soap and candle factories, cigarette factories, sawmills, printing and publishing houses, etc., are among the industries that make Shanghai the leading manufacturing center of China. Kiangsu's leading industry is silk. Wusih, Nanking, and Soochow are the principal centers for the manufacture of the silk cloth.

Communications.—Waterways: All the rivers are navigable, and the Province is interlaced with canals. Railways: Shanghai-Nanking; Shanghai-Hangchow-Ningpo; Shanghai-Woosung. Country roads are poor and few in number, as water transportation makes them unnecessary. Post offices, 98. Telegraph stations, 62. Cable companies, 3.

Cities.—Of more than 1,000,000 population: Shanghai. More than 500,000: Soochow. More than 100,000: Nanking (capital), Wusih, Chinkiang, Yangchow.

Treaty ports.—Shanghai, Chinkiang, Nanking, Soochow, Woosung.

Language of natives.—Throughout Province, Soochow or Shanghai dialect and Mandarin; in Shanghai, besides Shanghai dialect, also Ningpo and Cantonese.

American interests.—In eastern section of Province, under Shanghai consulate general; in western half, under Nanking consulate.

PROVINCE OF KWANGSI.[2]

Area.—77,000 square miles.

Population.—6,500,000; 84 per square mile; south and southeast most populous.

Topography.—Mountainous, ranges running southwest to northeast; West River and tributaries have good fertile valleys; climate tropical in south.

Agriculture.—Rice, sugar, fruits, grains, bamboo, aniseed, and cassia are the main products.

Minerals.—Antimony, coal, tin, iron, asbestos, and galena are known to abound. Very little has been done to develop what is considered a great store of mineral wealth in Kwangsi.

Industries.—Although proverbially poor, the Province seems to offer much opportunity for development. The world's supply of star-anise is produced there. Cassia is also produced. Firecrackers and leather are made at Nanning. Wuchow has a hosiery factory, a silk filature, a glass factory. Fishing lines made from the intestines of a species of silk worm, which feeds on the camphor tree, form a specialty peculiar to this Province.

Communications.—Waterways: Steamer traffic on West River; launch service to Lungchowfu; motor boats ascend Fu tributary to Kweilin. No railways. Country roads poor and in bad condition. Post offices, 31. Telegraph stations, 43.

Cities.—Of more than 75,000 population: Nanning, Wuchow, and Kweilin (capital).

Treaty ports.—Wuchow, Nanning, and Lungchow.

Language of natives.—Mandarin in north, Cantonese in south.

American interests.—Under the jurisdiction of the Canton consulate general.

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[1] Pronounced "Geeongsoo" in the north and "Keeongsoo" in the south.

[2] Pronounced "Gwongsai."

PROVINCE OF KWANGTUNG.[1]

Area.—100,000 square miles.

Population.—28,000,000; 280 per square mile; densest in West River delta and along the coast.

Topography.—Mountainous, except in valleys of West River; mountains extend southwest to northeast; valleys and delta regions very fertile, giving three crops a year; well-indented coast line, with good harbors; tropical.

Agriculture.—Silk, rice, sugar, tobacco, cassia, fruits, vegetables, bamboo, tea, cotton, ginger, indigo, ramie, camphor, and hemp are the main products. Rice is the principal crop, in some places three crops being produced in a year. A very superior hemp is grown, and the same is true of ramie, the latter being manufactured into grass cloth. The silk is inferior to Kiangsu or Chekiang silk. The oranges, lichees, pomeloes, and ginger of Kwangtung are of very high quality and are far-famed.

Minerals.—Iron and coal of good quality are known to abound. The mineral wealth of Kwangtung is still to be determined definitely, though it is believed to be extensive.

Industries.—The weaving of silk, grass cloth, and cotton, the manufacture of matting, paper, hosiery, porcelain, firecrackers, silverware, hardwood furniture, ivory materials, lacquer, jade, ornaments, embroideries, medicines, and drugs, and the preserving of fruits, ginger, etc., are among the manifold industries of the Cantonese, noted for their progressiveness and industrious habits.

Communications.—Waterways: Steamer service with all coast ports; splendid launch service in the Delta region; water connections with adjacent Provinces, so that country roads are few, though stone-paved and narrow and connecting market towns beyond reach of waterways. No wheeled vehicles used in Province, except railway cars. Railways: Canton-Samshui, Canton-Shiuchow, Canton-Kowloon (Hongkong), Kongmoon-Taishan, Swatow-Chaochowfu; under construction, Canton-Hankow. Post offices, 131. Telegraph stations, 70.

Cities.—Of more than 1,000,000 population: Canton (capital), most populous city in China. Between 100,000 and 500,000: Fatshan, Chaochowfu, Hongkong, Sheklung, Shekki, Samshui, Siulam, and Kongmoon. More than 25,000: Swatow, Macao, Hokshan, and Shaping.

Treaty ports.—Canton, Swatow, Kongmoon, Kowloon, Lappa, Pakhoi, Samshui, Hongkong (ceded to Great Britain), Macao (ceded to Portugal), and Kwangchow (leased to France).

Language and characteristics of natives.—Cantonese and tribal dialects are spoken. There are aborigines in the west and Hakkas in the northeast. Ninety-five per cent of the Chinese who emigrated to America were Cantonese.

American interests.—In northern half, under jurisdiction of Swatow consulate; in southern half, of Canton consulate general.

PROVINCE OF KWEICHOW.[2]

Area.—67,000 square miles.

Population.—8,000,000; 120 per square mile; densest in south and southeast.

Topography.—Seven-tenths mountainous; a great table-land with mean altitude over 4,000 feet; valleys of Yuan and Wu Rivers deep and narrow.

Agriculture.—Tobacco, bamboo, wood oil, fruits, and wheat are the principal products, though the Province has the reputation of being the most unproductive in China.

Minerals.—Coal, nitrate of potash, iron, zinc, nickel, silver, and quicksilver are said to abound. Kweichow is reputed to be wealthy in minerals, but unexplored.

Industries.—Mining seems to lend the greatest promise for the future in industry in this Province, claimed by some to be the richest in mineral wealth of all the Provinces in China.

Communications.—Waterways: Yuan and Wu both navigable. Four chief roads radiate from Kweiyang, connecting with Chungking, Tatingfu, Hunan, and Kwangsi. No railways. Post offices, 30. Telegraph stations, 14.

Cities.—Kweiyang (capital), 100,000; Anshunfu, 50,000; Tsunyi, 40,000.

Treaty ports.—None.

Language and characteristics of natives.—Mandarin is spoken among the Chinese, and there are also tribal dialects. One-third of the people are Chinese and the remainder aborigines.

American interests.—Under the jurisdiction of Canton consulate general.

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[1] Pronounced "Gwongdoong."

[2] Pronounced "Gwayjoe."

PROVINCE OF SHANSI.[1]

Area.—82,000 square miles.

Population.—10,000,000; 122 per square mile; densest in fertile depressions.

Topography.—A great loess plateau from 2,000 to 6,000 feet in elevation, with irregular mountain ranges running east and west; several large depressions, formerly lakes, form the fertile and populous sections of the Province; winters very cold, summers very hot.

Agriculture.—The loess soil is very fertile. Wheat, millet, sorghum, maize, cotton, tobacco, and fruits are the principal products.

Minerals.—Shansi is reputed to be the richest Province in China in coal deposits, producing now 4,000,000 tons a year—about one-fourth of China's production—but capable of supplying the world's demands for centuries. The Province is also rich in iron.

Industries.—Coal mining forms the principal industry. At one time, Shansi was noted for its cast-iron products.

Communications.—Waterways: The Fen River is navigable for flat-bottomed boats for 40 miles during a short season of the year. Cart roads traverse the fertile plains, but often far below the surface of the surrounding country, forming veritable canyons. Railways: Taiyuanfu, the capital, is connected with the Peking-Hankow Railway; the Peking-Kalgan line extends to Tatungfu. Post offices, 40. Telegraph stations, 18.

Cities.—Between 50,000 and 100,000; Taiyuanfu (capital) and Kweihwating. There are a dozen cities with populations of more than 20,000.

Treaty ports.—None.

Language of natives.—Mandarin.

American interests.—Under jurisdiction of Tientsin consulate general.

PROVINCE OF SHANTUNG.[2]

Area.—56,000 square miles.

Population.—30,000,000; 525 per square mile; most densely populated Province; densest in west.

Topography.—Mountainous in eastern and southern sections; western Shantung a great plain. Yellow River flows in northeasterly direction through Province, with frequent floods; soil rich; one good harbor (at Tsingtau).

Agriculture.—Wheat, cotton, maize, sorghum, millet, tobacco, hemp, peanuts, silk, fruits, walnuts, and vegetables are the principal products. It is a rich agricultural Province. Shantung produces the largest quantity of peanuts, mostly for export. A fine quality of tobacco from American seeds is grown.

Minerals.—Coal, iron, and gold are the principal minerals. A high quality of soapstone is also found. The coal and iron are being worked with modern methods and modern machinery and have developed into important industries.

Industries.—Strawbraid, from wheat straw and for straw hats; vermicelli, from beans, wheat, and sometimes sweet potatoes; pongee silk, from cocoons fed on oak leaves; bristles from pigs; egg albumen and yolk; cattle; and peanut and bean oils—these are some of the products that contribute to Shantung's activities. With iron and coal mining, they constitute the industries of the Province.

Communications.—Waterways: Grand Canal, principal waterway of commerce; Yellow River navigable through Shantung by small native craft only. Railways: Tientsin-Pukow, Tsinan-Tsingtau, with branch to Poshan. Country roads used extensively throughout Province for carts, wheelbarrows, and pack animals. Post offices, 104. Telegraph stations, 81.

Cities.—Tsinan (capital), 250,000. More than 75,000: Chefoo, Tsining, Tsingtau, and Weihsien.

Treaty ports.—Chefoo, Tsingtau (leased to Germany and now occupied by Japan), Tsinan, Chowtsun, Lungkow, Weihsien, Weihaiwei (leased to Great Britain).

Language and characteristics of natives.—Northern Mandarin is spoken. The natives are hardy and peaceable.

American interests.—In Shantung promontory, under jurisdiction of Chefoo consulate; in central and southern Shantung, under Tsinan consulate; in Kiaochow, under Tsingtau consulate.

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[1] Pronounced "Shonsee."

[2] Pronounced "Shondoong."

PROVINCE OF SHENSI.[1]

Area.—75,200 square miles.

Population.—8,000,000; 105 per square mile; densest in Han and Wei River Valleys.

Topography.—High mountain ranges extend across northern and southern ends of Province; north of Wei River country is a great fertile, low tableland; Wei Basin is called "cradle of China;" Province was once noted for forests, but now hills are denuded of trees.

Agriculture.—The valleys of the Wei and Han Rivers are particularly productive. The Wei basin produces the finest quality of cotton grown in China. Wheat, corn, tobacco, Irish potatoes, alfalfa, beans, oats, barley, millet, peanuts, silk, persimmons, and rapeseed are also produced in Shensi, the staple crop being wheat.

Minerals.—Shensi's mineral wealth remains to be exploited. Its inaccessibility and lack of waterways and good roads have prevented development. Droughts and rebellions have also discouraged effort.

Industries.—Native flour mills operated by water wheels are numerous. Mules, cattle, and sheep are raised in large numbers.

Communications.—Waterways: The Han River is navigable as far up as Hanchungfu; the Province is poor in navigable waterways. Railways: None; a projected line crosses central China through the Wei Basin to central Asia. There is a good road crossing from Shansi over the Wei Basin into central Asia, over which the traffic, by carts and pack animals, is very heavy. A road also passes through this basin from Peking to Chengtu in Szechwan, following also the Han River Valley but crossing over mountain passes 8,000 feet high. Carrying coolies and pack animals by the thousands may be seen on this great highway. Post offices, 37. Telegraph stations, 7.

Cities.—Sianfu (capital), population 500,000.

Treaty ports.—None.

Language of natives.—Mandarin.

American interests.—Under jurisdiction of Hankow consulate general.

PROVINCE OF SZECHWAN.[2]

Area.—220,000 square miles.

Population.—45,000,000; 200 per square mile; Chengtu plain, 45 by 90 miles, has densest population, estimated at more than 2,000 per square mile.

Topography.—Three-fourths of Province is a high plateau with mountains extending to an altitude of 18,000 feet; this plateau, of red sandstone, slopes toward east and southeast; southern part of Szechwan semitropical; Chengtu plain remarkably productive.

Agriculture.—Szechwan claims to produce everything raised elsewhere in China. Silk, wheat, sugar, tobacco, fibers, rhubarb, bamboo, tea, herbs, and wood oil figure among the important products. The Chengtu plain is perfectly irrigated by an artificial system 2,000 years old and is probably the most fertile spot for its size in China.

Minerals.—No proper investigation (or at least none whose results have been made public or otherwise accessible) has been made of the supposedly great mineral wealth of Szechwan, including iron, coal, copper, gold, quicksilver, and petroleum, all of which are reported as being present in quantity. The salt wells bored to a depth of 3,000 feet have disclosed the presence of petroleum and gas in considerable quantity.

Industries.—As Szechwan has but one outlet that can be advantageously used—the great Yangtze River—and even in this case navigation is fraught with danger because of the terrible rapids in the upper sections, the Province has always been self-supporting. There is much wealth there. Many of its products find their way out. The Szechwan salt wells are famous, some of them being 3,000 feet deep, bored by drills dropped down with bamboo ribbons, and requiring generations to reach this depth. It is a curious fact that the oil and gas, which comes with the brine from these wells, is treated as an evil to be gotten out of the way. The silk industry is probably the leading industry of Szechwan. Wood oil, vegetable tallow, a distinctive insect wax, musk, medicines, wool, hides, tobacco, and paper enter into the industries of the Province.

Communications.—Waterways: There is steam travel on the Yangtze as far as Suifu, and in the summer as far as Kiatingfu on the Min River. The three main branches of the Yangtze in Szechwan carry a heavy junk traffic. Navigation on the Yangtze beyond Ichang is perilous by reason of the rapids, but within recent years regular steamers have been engaged in this traffic. Railways: None, though several are projected and a concession has been granted to an American concern. There are no cart roads. Many of the roads are paved with flagstones 4 feet wide. Travel is by foot, on horseback, or by chair. Goods are carried on backs of animals or men. Post offices, 127. Telegraph stations, 40.

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[1] Pronounced "Shunsee."

[2] Pronounced "Szechwon."

Cities.—Chungking, 500,000; Chengtu (capital), 400,000. More than 100,000: Kiating, Fowchow, Wanhsien, Tzeliuching. Between 25,000 and 100,000: Chungpa, Batang, Mingyuanfu, Fengtuhsien, Kweichowfu, Suifu, and Yachowfu.

Treaty port.—Chungking.

Language and characteristics of natives.—Western Mandarin and tribal dialects. Chinese and aboriginal tribes.

American interests.—Under the jurisdiction of the Chungking consulate.

PROVINCE OF YUNNAN.

Area.—146,000 square miles.

Population.—9,000,000; 60 per square mile; densest on plains and eastern table-land.

Topography.—"The Switzerland of China;" high mountain ranges in west, table-land in south; climate healthful; good grazing lands.

Agriculture.—Wheat, cotton, silk, tea, rice, beans, tobacco, fruits, and vegetables are produced. The hams of Yunnan are famous throughout China, and pigs are well fed.

Minerals.—Yunnan is noted for mineral rather than agricultural wealth. Tin, antimony, coal, alum, arsenic, copper, gold, iron, mercury, silver, spelter, and tungsten are found in Yunnan, tin having occupied thus far the leading rôle. China's copper-coin requirements in the past have been met, it is stated, from Yunnan mines.

Industries.—Agriculture and mining have thus far given Yunnan such industries as it has.

Communications.—Waterways: The Ta and Red Rivers are both navigable by small boats for short distances. Railways: Haiphong-Hanoi-Yunnanfu. Roads: Only paths. Post offices, 42. Telegraph stations, 33.

Cities.—Yunnanfu (capital), Chaotung, and Tungchwan, each with less than 50,000.

Treaty ports.—Mengtsz, Szemao, Tengyueh.

Language and characteristics of natives.—Western Mandarin and tribal dialects. Fifty to 60 aboriginal tribes.

American interests.—Under the jurisdiction of the Canton consulate general.

MANCHURIA (THREE PROVINCES: FENGTIEN, KIRIN, HEILUNGKIANG).

Area.—365,000 square miles.

Population.—15,000,000; 40 per square mile; densest in Liao Plain.

Topography.—Three provinces, Fengtien, Kirin, and Heilungkiang; northern region larger and better wooded, sloping toward Amur River; southern, more fertile, more thickly inhabited, sloping toward Gulf of Liaotung; Sungari plain in north and Liao plain in south have wonderful soil and splendid crops; large areas still uncultivated; on rich plateau lands, grass sometimes grows 6 feet high; climate is healthful, though winters are very severe.

Agriculture.—Manchuria contains some of the finest agricultural land in the world. It seems strange that this virgin country, so sparsely inhabited and so rich in possibilities, should have remained all these centuries in proximity to densely populated countries and not have been more effectively colonized ere this. The principal crop of Manchuria now is beans, an article whose value has only recently come to be appreciated by the outside world. Wheat ranks second in importance. Other cereals, such as millet, sorghum, and maize, are raised in large quantities. Silk, fed on oak leaves, is one of the products of Manchuria. Tobacco, beet sugar, indigo, vegetable oils, fruits, and live stock add to Manchuria's agricultural wealth.

Minerals—Practically the whole of South Manchuria is one vast coal field. Iron and gold are also found. Japanese capital is developing the coal and iron properties in a large way

Industries.—Bean oil, bean cake, and bean products generally constitute a great industry in Manchuria. Raw silk, tobacco, flour, furs and skins, lumber, and iron and coal are developing into profitable industries, employing in some cases enormous capital. The South Manchuria Railway, with its ramifications of industry, is the biggest institution in Manchuria.

Communications.—Waterways: The Amur River is navigable for 450 miles for steamers and 1,500 miles for smaller craft; the Sungari is navigable to Kirin, the

Nonni to Tsitsihar, the Liao to Tungkiangtze, and the Yalu for its entire course. Railways: Mukden is connected on the south with Tientsin and Peking, on the north with Harbin and Tsitsihar, on the southeast with Port Arthur and Dairen, and on the east with Antung; through rail service from Peking to Yokohama, via Manchuria and Korea, is established, and also in peace times from Peking to Petrograd via Manchuria. Country roads are relatively good, and travel is by carts or on mules. Post offices, 203. Telegraph stations, 132.

Cities.—Mukden and Kirin, 100,000 each. Kwangchengtze (Changchun), Harbin, Aigun, Newchwang, and Dairen are other important cities.

Treaty ports.—Aigun, Antung, Dairen (Japanese leased territory), Manchouli, Newchwang, Sansing, Suifenho, Mukden, Fakumen, Fenghwangcheng, Hsinmintun, Tiehling, Tungkiangtze, Yingkow, Liaoyang, Changchun, Kirin, Ninguta, Chientao, Tsitsihar, Hailar.

Language of natives.—Northern Mandarin is most common.

American interests.—In north, under jurisdiction of Harbin consulate; in northeast, of Antung consulate; in Dairen and leased territory, of Dairen consulate; in South Manchuria, of Mukden consulate general.

CHINESE DEPENDENCIES.

MONGOLIA.

Area.—1,370,000 square miles.

Population.—2,500,000; 2 per square mile; densest in east and in river valleys.

Topography.—A vast basin-like plateau of 3,000 to 4,000 feet elevation, surrounded by mountain ranges and undulating steppes; near center is Gobi Desert, of more than 260,000 square miles; frequent sandstorms; atmosphere dry, winters extremely cold. For purposes of administration, country is divided into two sections—northern or outer Mongolia, and southern or inner Mongolia.

Agriculture.—The country is pastoral and the people nomadic. Cattle and sheep raising is carried on, with agriculture in certain favored regions. Awaiting development are wonderful stretches of virgin fertile lands, capable of producing enormous crops, and vast stretches of land wonderfully adapted to grazing.

Minerals.—Gold has been mined for years. The mineral wealth is subject to investigation, but is reputed to be enormous.

Industries.—Cattle and sheep raising, hides, wool (sheep's and camel's), licorice, and drugs seem to form the basis of the industries.

Communications.—Waterways: Canals and rivers are little used, as they are off the trade routes. Railways: None; one projected to connect Urga, the capital, with the Peking-Kalgan line. An American automobile service has been established between Kalgan and Urga, making the trip in four days. Roads are poor and not well marked. Main highway leads from Kalgan to Kiakhta via Urga. Caravan routes lead to Siberia with camel and bullock wagon trains.

Cities.—Urga (capital), 38,000, the only important city.

Treaty port.—Taonan.

Language and characteristics of natives.—Mongolian is spoken. The people are Turkish in the west, Chinese in the south, and Mongols in Mongolia proper.

American interests.—Under jurisdiction of Tientsin consulate general.

SINKIANG (INCLUDING NEW PROVINCE AND CHINESE TURKESTAN).

Area.—550,000 square miles.

Population.—2,500,000; 4 per square mile; densest in eastern section.

Topography.—For the most part Chinese Turkestan is an immense desert, surrounded by mountains of great height and with fertile spots occurring only here and there.

Agriculture.—Where irrigation is possible, splendid crops are produced. The famous Oasis of Hami is exceptionally fertile, producing barley, oats, millet, and wheat. Its melons are famous throughout China, for in former years many were sent to the Peking Court.

Minerals.—Chinese Turkestan produces a fine quality of jade. Its mineral resources are as yet unknown.

Industries.—Horses, camels, donkeys, sheep, and goats are raised. Carpets, jade, furs, skins, and silk fabrics are among the articles produced.

Communications.—Several ancient roads, of great historical interest but in bad condition, are used as trade routes.

Cities.—Kashgar, 60,000; Yarkand, 50,000; Khotan, 30,000; Turfan, 20,000; Urumtsi, 30,000.

American interests.—Under the jurisdiction of Hankow consulate general.

TIBET.

Area.—465,000 square miles.

Population.—6,000,000; 12 per square mile.

Topography.—The greater part of Tibet is desert, but valleys in the south and west are fertile and vegetation is luxuriant. The valley of the Chumbi River is reported to be the most fertile portion. The country as a whole has the greatest average elevation of any similar area in the world. On account of its marginal mountain ranges it is almost inaccessible.

Agriculture.—In the fertile valleys fruits and vegetables are grown, as well as corn and barley. Tibet furnishes excellent pasture lands. The domestic animals, the tame yaks, asses, goats, sheep, and horses, are sources of wealth to the natives.

Minerals.—Little is known of the mineral wealth, though all writers speak of gold abounding in free form. There is a superstition against mining, so that it is discouraged. Tibet is, however, looked upon as rich in minerals.

Industries.—Yak hides, lamb skins, musk, gold dust, wool, saddle rugs, carpets, and medicines are some of the products that are exchanged for Chinese wares and products. The Tibetans generally lack enterprise, though they are spoken of highly in various other respects.

Communications.—Roads are few and bad. Rope bridges are used in crossing rivers and torrents. Sometimes the yak skin is used in making a species of light ferry boat. Government couriers have been known, traveling day and night, with relays of horses, to reach Peking from Lassa within a month.

Cities.—Towns are all small, generally with a maximum of a few hundred inhabitants. Lassa, the capital, has 40,000, more than half of whom are priests. This number is augmented considerably from time to time by pilgrims.

Treaty port.—Yatung, a small town with only a few score inhabitants.

Language and characteristics of natives.—The language of the natives is polysyllabic and highly developed. They are credited with being among the more highly endowed peoples of the world. They are fond of music and dancing and are complimented by travelers for their kindly bearing, cheerfulness, and frankness.

American interests.—Under the jurisdiction of the Chungking consulate.

COMMERCIAL STATISTICS FOR CHINA AS A WHOLE.

Prepared in the Bureau of Foreign and Domestic Commerce.

Manufacturers and merchants who are already doing business with China or who contemplate entering the field are necessarily guided in their efforts by a consideration of the purchasing and productive capacity of the country. The customary requirements, tastes, and proclivities of the Chinese people and their ability to buy articles of any given kind form the basic factors in the American exporter's problem. The extent to which any particular class of goods may be sold in the great Oriental Republic is directly indicated by past purchases. The most practicable method, therefore, of determining the possibilities of the market is by a careful investigation of commercial movements as shown by customs data. Consequently, the presentation of adequate trade statistics is regarded as of primary importance in a commercial handbook of this character.

In the 17 chapters covering the consular districts in China there are many tables showing the imports, exports, and total trade of the principal treaty ports. In the present chapter complete figures will be furnished for the trade of China as a whole. Statistics will be given for three years—1918, the most recent year; 1913, the last normal year in world trade before the beginning of the Great War; and 1904, affording a basis of comparison with Chinese commerce a decade before the outbreak of hostilities. Since, in classification and arrangement, the 1904 statistics are not readily comparable with those for 1913 and 1918, they are shown in separate tables, following the more recent figures.

In view of the fact that American exporters and importers are interested chiefly in the trade between China and the United States, the official American figures relating to that trade are given in detail

VALUE OF CHINA'S DIRECT TRADE WITH EACH COUNTRY.

The following table shows the value of China's imports from, exports to, and total trade with each country during the years 1913 and 1918; *unless otherwise indicated, all values in this book are expressed in United States currency.*

Countries.	Imports.		Exports.		Total.	
	1913	1918	1913	1918	1913	1918
Australia, New Zealand, etc.	$511,770	$1,141,158	$390,994	$1,599,755	$902,764	$2,740,913
Austria-Hungary	3,004,875	....	1,130,078	....	4,134,953	....
Belgium	11,540,680	....	4,772,324	....	16,313,005	....
British India	35,205,007	9,530,753	4,512,734	7,203,205	39,717,741	16,733,958
Canada	1,360,121	12,354,185	475,578	4,897,999	1,835,699	17,252,184
Chosen (Korea)	2,571,096	12,475,466	4,966,654	16,326,683	7,537,750	28,802,149
Denmark	73,520	229	211,042	714,025	284,562	714,254
Dutch East Indies	4,984,020	10,217,922	1,899,089	3,092,263	6,883,110	13,310,185
France	3,863,348	1,871,648	29,706,591	36,350,325	33,569,939	38,221,973
French Indo-China	3,486,086	3,291,822	1,375,676	1,901,050	4,861,762	5,192,872
Germany	20,632,450	....	12,411,388	....	33,043,840	....
Hongkong [a]	125,122,711	193,494,836	85,386,794	139,566,705	210,509,510	333,061,541

[a] The imports from Hongkong come originally from, and the exports to that colony are further carried on to, Great Britain, the Continent of Europe, America, Japan, Australia, India, the Straits, etc., and coast ports of China.

Countries.	Imports.		Exports.		Total.	
	1913	1918	1913	1918	1913	1918
Italy	$483,802	$425,512	$6,063,850	$11,494,293	$6,547,652	$11,919,805
Japan (including Formosa)	87,003,716	284,958,284	47,781,710	194,929,152	134,785,417	479,887,436
Macao	4,808,592	5,111,997	3,610,284	5,401,565	8,418,876	10,513,562
Mexico and Central America	5	55	43,082	56	43,087	111
Netherlands	1,037,997	1,324	6,336,807	41	7,374,804	1,365
Norway	253,393	10	1,973	111	255,366	121
Philippine Islands	1,015,219	3,809,874	555,967	2,568,800	1,571,186	6,378,674
Portugal	855	....	13,446	....	14,301	....
Russia:						
European ports	214,030	15,192	3,636,052	99	3,850,083	15,291
Land frontier	8,936,224	1,710,888	2,256,857	2,353,022	11,193,081	4,063,910
Amur ports	375,457	316,155	5,809,447	1,900,720	6,184,904	2,216,875
Pacific ports	6,623,754	5,579,458	21,045,372	13,167,931	27,669,126	18,747,389
Siam	38,088	471,664	1,478,337	2,352,632	1,516,425	2,824,296
Singapore, Straits Settlements, etc.	6,513,918	12,325,532	5,505,926	7,635,823	12,019,844	19,961,355
South Africa (including Mauritius)	7	8,905	45,734	140,605	45,741	149,510
South America	126	18	48,195	241,689	48,321	241,707
Spain	2,468	3,114	277,691	22,012	280,159	25,126
Sweden	1,123,381	11,773	166,688	....	1,290,069	11,773
Switzerland	42,307	16,300	34,773	44	77,080	16,344
Turkey, Persia, Egypt, Aden, etc	102,196	453,413	2,695,006	3,636,089	2,797,202	4,089,502
United Kingdom	70,648,078	59,519,120	11,916,535	30,140,655	82,564,613	89,659,775
United States	25,826,427	70,012,450	27,447,069	92,021,107	53,273,496	162,033,557
Total	427,405,724	689,129,057	294,009,743	579,658,456	721,415,467	1,268,787,513
Less reexports to foreign countries	11,757,220	27,141,610	....	....	11,757,220	27,141,610
Net total	415,648,504	661,987,447	294,009,743	579,658,456	709,658,247	1,241,645,903

The following table shows the value of the trade with each country during 1904:

Countries.	1904		
	Imports.	Exports.	Total.
Australia, New Zealand, etc	$345,409	$152,366	$497,775
British America	1,509,197	371,030	1,880,227
British India	22,489,359	1,665,973	24,155,332
Cochin-China, Tongking, and Annam	1,224,816	2,061,695	3,286,511
Continent of Europe, except Russia	16,412,027	31,069,756	47,481,783
Hongkong	98,477,337	60,626,896	159,104,233
Japan (including Formosa)	35,014,511	26,514,827	61,529,338
Java and Sumatra	3,607,067	271,972	3,879,039
Korea	613,765	970,705	1,584,470
Macao	2,020,426	3,531,001	5,551,427
Philippine Islands	541,193	213,175	754,368
Russia via Odessa and Batum	3,081,120	1,962,958	5,044,078
Russia and Siberia via Kiakhta and Dalny	....	1,537,784	1,537,784
Russian Manchuria	37,178	28,598	65,776
Siam	180,265	906,013	1,086,278
Singapore and Straits Settlements	2,835,219	2,559,671	5,394,890
South Africa, including Mauritius	1,566	68,599	70,165
South America	....	18,171	18,171
Turkey in Asia, Persia, Egypt, Algiers, Aden, etc	797,392	3,064,673	3,862,065
United Kingdom	30,940,227	10,658,434	50,598,661
United States	20,368,300	18,907,407	39,275,707
Total imports	249,496,374	....	....
Less reexports to foreign countries	9,342,070	....	....
Total foreign countries — net imports	240,154,304	....	407,316,008
Total foreign countries — exports	....	167,161,704	

Leaving out of consideration the merchandise passing through Hongkong (for which the country of origin can not be ascertained), a comparison of the two preceding tables shows that, between 1904 (a decade before the war) and 1918, direct British sales to China increased 49 per cent, American sales increased 244 per cent, and Japanese sales increased 714 per cent.

STATISTICS OF IMPORTS.

The following table shows, by quantity and value, the net imports from foreign countries into China during the years 1913 and 1918; the figures are from the official reports of the Chinese Maritime Customs:

Imports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
COTTON GOODS.				
Shirtings, gray, plain:				
English ... pieces	4,109,011	$9,616,967	690,566	$4,196,671
Japanese ... do	184,218	540,392	949,676	5,126,119
Other kinds ... do	46,288	122,734		
Sheetings, gray, plain:				
American ... do	1,668,716	4,451,851	89,900	522,999
English ... do	133,883	406,805	8,802	65,574
Japanese ... do	3,397,362	6,909,359	2,227,102	12,718,076
Other kinds ... do	9,080	24,204		
Shirtings, white:				
Plain—				
English ... do	4,537,900	13,986,335	1,544,075	11,086,261
Other kinds ... do			635,655	4,450,748
Figured ... do			113,063	746,698
Irishes ... do			18,540	157,278
Figured, brocaded, striped, and spotted ... pieces	70,005	249,083		
Drills:				
American ... do	525,291	1,539,621		
English ... do	85,708	286,125	18,327	139,098
Japanese ... do	1,677,111	4,600,251	929,522	5,184,034
Other kinds ... do	3,317	11,851		
Jeans:				
American ... do	41,201	132,359	10,254	55,144
English ... do	1,554,688	3,776,825	116,512	756,367
Japanese ... do	86,454	219,694	1,964,052	0,664,909
Other kinds ... do	38,525	84,859	192	820
T cloths:				
32 inches—				
English ... do	1,167,640	2,340,625	113,475	460,720
Japanese ... do	370,192	445,222	934,736	3,067,420
Other kinds ... do	39,990	55,699	2,078	7,536
36 inches—				
English ... do	116,596	247,577	23,643	98,364
Other kinds ... do	1,686	4,295	56,332	236,783
Bleached, 32 inches, 40 yards ... do			103,034	539,850
Cambrics, lawns, and muslins, white, dyed, or printed:				
12 yards ... pieces	331,856	238,948	170,673	242,445
30 yards ... do			14,031	82,136
40 yards ... do			110,290	750,315
Lenos and balzarines, white, dyed, or printed ... pieces	124,538	191,817	52,113	202,371
Fancy muslins ... yards			95,936	20,489
Art muslins and cretonnes, unenumerated ... yards			298,903	71,683
Plain cotton prints ... pieces			839,469	4,076,276
Chintzes and plain cotton drills ... do	1,131,920	2,034,899		
Printed drills, furnitures, and twills ... do	82,590	120,017	4,043	25,243
Printed crape ... do			9,623	45,610
Printed satteens, reps, etc ... do	148,103	390,812	58,618	413,682
Printed "T" cloths ... do	50,948	78,415		
Turkey-red cottons and dyed T cloths ... do	985,988	1,848,237	542,156	2,151,401
Dyed cottons, plain:				
Fast black—				
Italians ... do			682,737	5,802,808
Venetians ... do			238,484	3,003,735
Lastings ... do			73,390	585,135
Colored—				
Italians ... do			323,244	2,290,529
Venetians ... do			204,842	1,690,774
Poplins ... do			93,317	1,009,481
Lastings ... do			597,362	4,541,176

Imports.		1913		1918	
		Quantity.	Value.	Quantity.	Value.
COTTON GOODS—continued.					
Dyed cottons, figured:					
Italians	pieces			96,878	$689,321
Venetians	do			26,340	291,297
Poplins	do			480,665	5,706,171
Lastings	do			146,260	1,140,595
Cotton italians, venetians, crêpe, and lastings, plain, fast black	pieces	1,745,901	$6,865,147		
Cotton italians, venetians, and crêpe, plain, colored, and lastings, plain	pieces	1,021,779	3,393,171		
Cotton italians, venetians, crêpe, and lastings, figured	pieces	905,446	3,210,350		
Shirtings:					
Dyed, plain	do	107,988	345,477	69,809	523,590
Hongkong-dyed, plain	do	120,723	265,146	72,311	240,623
Dyed, figured, brocaded, spotted	do	33,477	117,940		
Spanish stripes, 64 inches	do	47,161	140,930	22,796	191,571
Flannelettes:					
Plain, dyed, or printed	do			374,192	2,166,515
Yarn-dyed	do			48,345	219,607
Yarn-dyed, Japanese	do			92,413	434,128
Cotton flannels:					
Plain, dyed, and printed	do	568,541	1,436,812		
Plain, dyed, and printed, Japanese	do	112,271	268,150		
Striped	do	146,141	295,736		
Striped, Japanese	do	82,077	194,455		
Fancy woven cottons	yards	5,705,911	595,899		
Cottons, yarn-dyed	do			8,508,374	1,850,159
Crimps and crepons	do			2,045,912	463,355
Japanese cotton crêpe	do	309,358	23,911	72,383	1,086
Japanese cotton cloth	do	13,312,560	668,726	83,872,769	7,386,541
Chinese cotton cloth (nankeens)	pounds			972,931	592,115
Velvets and velveteens	yards	6,574,036	1,385,462	3,542,250	1,734,949
Blankets	pieces	1,104,924	459,890	538,484	583,090
Handkerchiefs	dozens	1,203,028	313,176	448,073	829,859
Handkerchiefs, Japanese	do	81,656	14,800	571,881	296,700
Towels	do	1,634,068	564,596	91,315	94,793
Towels, Japanese	do	546,528	133,708	1,464,282	1,233,754
Cotton goods, unenumerated	yards	77,436,971	4,454,796	4,596,573	1,114,787
Cotton yarn:					
English	pounds	683,733	159,654		
Hongkong	do	1,290,933	168,167	60,133	22,822
Indian	do	177,408,933	26,533,665	48,128,280	19,560,471
Japanese	do	173,456,133	23,729,604	99,460,951	42,183,149
Other kinds	do	5,208,667	1,211,715	965,998	354,972
Gassed, mercerized, or dyed	do			2,268,394	1,762,706
Wooloa or berlinette	do	3,733	2,041		
Cotton thread:					
In balls	do	551,600	254,187	637,998	543,606
On spools	gross	639,139	820,279	488,821	1,870,573
					180,781,863
Less excess of reexports over imports					185,019
Total cotton goods			132,983,468		180,596,844
WOOL AND COTTON UNIONS.					
Alpacas, lusters, and orleans	yards	746,556	142,086	765,974	426,214
Blankets and rugs	pounds			164,778	70,900
Coatings and suitings	yards			899,027	1,257,216
Union and poncho cloth	do	2,398,974	836,545	138,732	146,723
Union italian cloth	pieces	1,479	10,372		
	yards			97,990	99,842
Union shirtings	do			144,016	86,877
Woolen and cotton flannel	do	131,158	57,182		
Wool and cotton unions, unenumerated	do	3,549,236	1,477,267	349,772	435,258
Total wool and cotton unions			2,523,452		2,523,030
WOOLEN GOODS.					
Blankets and rugs	pounds	1,619,557	447,533	175,373	254,109
Broadcloth, and medium, habit, and Russian cloth	yards	352,131	367,903	1,306	8,636
Camlets and bunting	pieces	18,091	173,842	6,148	169,691
Coatings and suitings	yards			712,293	1,802,999
Flannel	do	79,430	26,111	23,919	24,554
Lastings	pieces	32,168	287,722	3,626	127,854
Long ells	do	48,732	212,809	3,413	54,153

Imports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
WOOLEN GOODS—continued.				
Spanish stripes....yards..	240,919	$109,130	11,042	$14,051
Woolen goods, unenumerated....do....	1,079,282	769,928	186,398	394,252
Woolen and worsted yarn and cord...pounds..	1,952,800	1,162,018	459,599	975,886
Total woolen goods....	....	3,556,996	....	3,819,185
MISCELLANEOUS PIECE GOODS.				
Canvas and cotton duck....yards..	3,027,757	585,386	1,787,567	650,237
Gunny and hessian cloth....do....	3,989,858	245,583	4,454,568	668,704
Linen goods and mixtures....do....	186,864	49,841	208,182	92,469
Plushes and velvets....pounds..	....	....	57,450	203,358
Plushes....do....	93,597	119,617	....	....
Silk piece goods....do....	182,819	803,189	150,578	1,260,308
Silk piece goods mixtures....do....	264,493	467,034	426,349	1,264,332
Silk piece goods, artificial....yards..	....	....	1,251,468	579,704
Silk stripe cotton cloth, Japanese....pounds..	7,887	6,420	....	....
Imitation fur cloth, silk, wool, or cotton. yards..	....	....	268,285	792,480
Upholstery fabrics....do....	....	....	55,370	88,035
Miscellaneous piece goods, unenumerated....	1,436,756	227,616	....	409,797
Total miscellaneous piece goods....	....	2,504,686	....	6,009,424
METALS AND MINERALS.				
Aluminum....pounds..	18,133	3,799	20,933	14,729
Aluminum, manufactured....do....	114,267	47,166	32,000	47,664
Brass and yellow metal:				
Bars, rods, sheets, plates, and nails..do....	2,331,333	359,496	....	....
Bars, sheets, wire, etc....do....	....	....	2,554,260	906,453
Wire....do....	435,733	62,998	....	....
Unenumerated....	687,200	149,936	....	123,246
Copper:				
Bars, rods, sheets, plates, nails, and wire ....pounds..	1,862,400	326,216	1,384,263	492,976
Ingots and slabs....do....	26,764,800	4,468,421	16,187,693	5,097,598
Unenumerated....	550,409	80,237	....	315,343
Iron and mild steel, new:				
Anchors, anvils, castings, chains, and forgings....pounds..	2,140,800	102,572	1,821,062	243,718
Angles and tees....do....	....	....	11,971,970	873,457
Bars....do....	79,047,200	1,348,669	51,774,271	3,739,522
Cobbles and wire shorts....do....	45,450,133	617,032	13,013,167	583,688
Hoops....do....	11,889,467	259,020	9,767,176	768,824
Joists....do....	....	....	2,402,261	227,611
Nail-rod....do....	16,446,000	238,130	677,065	48,074
Nails and rivets....do....	43,909,333	1,050,377	26,507,134	2,114,502
Pig and kentledge....do....	17,455,733	164,031	14,311,831	791,643
Pipes and tubes....do....	8,514,800	270,517	38,022,038	3,414,921
Plate cuttings....do....	47,977,200	555,694	5,961,185	379,472
Rails....do....	39,047,333	653,225	44,001,757	2,341,294
Screws....do....	....	....	937,064	268,101
Sheets and plates....do....	47,703,200	912,703	30,874,056	3,619,097
Wire....do....	8,131,333	205,953	2,138,261	182,196
Unenumerated....do....	15,208,800	479,834	8,875,014	798,605
Iron and mild steel, old....do....	85,291,600	885,068	16,987,691	560,395
Iron, galvanized:				
Sheets....do....	30,086,133	1,027,958	9,298,910	1,297,336
Wire....do....	8,791,867	240,628	10,745,706	1,102,099
Iron and steel manufactures, n. e. s....do....	16,941,467	1,065,527	2,117,728	274,134
Lead:				
In pigs and bars....do....	14,349,333	536,074	9,604,509	977,784
Tea and sheet....do....	486,667	22,280	917,998	89,046
Other manufactures....do....	942,000	38,235	1,170,930	156,099
Other manufactures....value..	....	....	....	74
Nickel, manufactured and unmanufactured....pounds..	240,933	87,688	145,733	88,036
Quicksilver....do....	87,200	47,751	15,600	36,318
Steel:				
Bamboo, bars, hoops, sheets, and plates....pounds..	18,514,667	561,068	25,745,002	3,094,833
Cast, wire, and wire rope....do....	1,445,467	116,404	3,420,125	738,029
Tin:				
In slabs....do....	7,037,467	1,694,207	3,422,791	2,072,272
Manufactured, not including tinfoil..do....	690,800	81,493	2,933	1,354
Tinned plates....do....	48,448,800	1,777,990	42,098,028	5,039,511
White metal or German silver....do....	547,733	148,687	32,133	24,195

Imports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
METALS AND MINERALS—continued.				
Zinc:				
Spelter ... pounds	1,168,133	378,188	680,465	375,531
Sheets and plates ... do	3,368,800	243,011	538,665	115,117
Other manufactures ... do	977,200	67,809	191,733	37,197
Metals and minerals, unclassed ... do	1,521,867	177,471	17,539,423	1,224,675
Metals and minerals, unclassed ... value				156,361
Ores:				
Copper ... pounds			578,782	2,733
Iron ... do	212,800	151	34,404,447	68,373
Lead ... do			83,200	332
Manganese ... do	30,133	978	616,398	33,567
Zinc ... do			10.124,775	120,534
Unclassed ... do	13,867	76	7,712,514	82,204
Total metals and minerals		21,254,787		44,901,073
SUNDRIES.				
Animals, living:				
Cattle ... number	7,968	107,909	2,685	72,645
Goats ... do	770	1,381	3,067	11,708
Horses ... do	1,014	45,930	532	20,338
Pigs ... do	24,217	205,727	3,287	37,877
Poultry ... do	21,695	5,789	39,171	7,036
Sheep ... do			10	215
Other kinds ... do	523	5,292	2,218	3,337
Aniseed, star ... pounds	1,850,400	156,715	3,231,325	559,729
Arms and munitions:				
Of war		4,912,333		16,812,978
Sporting				49,691
Asbestos		46,834		133,911
Bags, all kinds ... number	32,049,708	2,270,740	43,368,507	5,224,995
Beans, peas, etc ... pounds	49,245,467	740,087	55,122,262	1,447,795
Bedsteads:				
Iron ... number			9,364	131,736
Brass ... do			735	36,821
Belting, machine		195,301		643,886
Betelnuts ... pounds	7,975,067	210,824	6,332,518	312,624
Bêche de mer ... do	5,101,867	849,845	5,511,053	2,006,857
Bird's-nests ... do	114,364	477,095	128,021	969,386
Biscuits				138,153
Books, printed, and music, engraved or printed		398,717		430,589
Borax, crude and refined ... pounds	653,467	31,830		
Bottles, empty (not including india-rubber bottles)				332,039
Boxes, fancy ... gross	139,444	118,221	39,451	100,256
Braid:				
Llama ... pounds	337,600	266,053	13,200	28,972
Other kinds		328,864		139,734
Bran, all kinds ... pounds	281,345,200	2,416,429	251,602,304	3,331,654
Bricks and tiles ... pieces	3,751,101	111,311	8,138,341	627,405
Building materials, n. e. s				1,102,556
Butter (including ghee) ... pounds	1,635,467	424,472	1,824,129	606,023
Buttons, brass and fancy ... gross	1,439,665	382,635	1,151,015	358,722
Candles, all kinds ... pounds	6,717,733	423,665	8,350,779	1,262,126
Candle-making materials:				
Candle wick ... do			20,400	14,623
Stearine ... do			1,314,530	284,760
Unclassed				1,298
Cardamoms ... pounds	979,867	143,582	1,234,930	367,579
Carpets and carpeting		85,473		365,690
Casks, etc., empty				1,270,719
Caviare		16,757		130,440
Celluloid				102,303
Cement ... pounds	82,402,533	443,393	114,975,713	1,137,907
Cereals:				
Barley ... do	682,267	21,740	630,398	29,722
Maize ... do	1,103,200	11,682	5,793,986	103,611
Oats ... do	3,407,600	60,238	7,600	87
Rice and paddy ... do	721,988,133	13,401,731	931,201,005	27,172,881
Rye ... do	156,800	2,831		
Wheat ... do	275,200	4,529	2,133	100
Other kinds ... do	1,729,200	72,546	2,349,194	148,645
Charcoal ... do	29,538,800	162,228	12,256,903	129,800
Charts, maps, pictures, and other products of the graphic arts		29,462		89,428
Cheese ... pounds	389,333	80,024	310,399	160,245
Chemical products (not including match-making materials, medicines, and soda)		426,313		1,431,790
Chinaware, coarse and fine (including crockery and earthenware)		882,697		1,497,572

Imports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Cigarette-making materials (not including tobacco)				$1,534,977
Cigarettes..........thousands	6,209,037	$9,177,600	9,231,941	28,612,391
Cigars..........do	38,565	348,621	48,390	911,044
Cinnamon..........pounds	90,133	47,494	117,330	99,892
Clocks and watches..........number	549,180	679,640	347,744	1,034,881
Clothing, hats, etc. (not including hosiery, shoes and boots of leather, and haberdashery, but including leather gloves)				6,004,996
Clothing, hats, boots, shoes, and gloves (other than india rubber or leather)		4,739,397		
Cloves and spices..........pounds	1,053,467	68,767	249,599	40,494
Coal..........tons	1,690,892	6,867,733	1,075,057	15,024,020
Cocoa, crude..........pounds	5,467	2,931	450,266	92,392
Cocoa and chocolate, prepared..........do	132,692	48,679	456,851	288,609
Coffee..........do	350,844	59,226	6,351,365	1,072,289
Coke..........tons	5,597	52,259	4,154	104,172
Confectionery (not including cocoa and chocolate)		241,714		208,954
Cordage..........pounds	2,973,467	287,960	6,099,451	688,164
Corks				67,544
Cotton gins		77,751		111,355
Cotton, raw..........pounds	17,767,333	2,175,352	25,347,937	7,242,127
Cotton wadding..........do			1,623,064	243,526
Covers, bed and table		875,915		400,719
Crucibles				293,173
Cutlery and electroplated ware		194,328		
Dyes, colors, and paints:				
Aniline		3,937,927		897,086
Bark, mangrove..........pounds	14,363,333	127,285	14,674,363	237,140
Cinnabar..........do	228,533	94,912	150,400	286,617
Indigo—				
Artificial..........do	42,610,000	7,022,571	200,133	174,944
Vegetable..........do	1,682,667	41,509	8,277,713	750,836
Sapanwood..........do	3,185,467	37,611	5,075,454	129,393
Vermilion..........do	766,533	177,536	297,999	245,102
Dyes and colors, unclassed..........do	18,066,533	697,288	14,281,431	1,088,026
Paints and paint oil..........do	9,701,867	628,935	11,089,172	1,265,451
Eggs, game, and poultry..........number	3,469,003	23,516	2,378,071	23,829
Electrical materials and fittings		1,692,985		4,930,900
Emery and corundum (powder, cloth, and paper)		48,904		140,398
Enameled ware		837,180		1,320,093
Explosives for industrial purposes..........pounds	820,133	136,261	577,465	328,263
Fans:				
Palm leaf..........number	47,748,439	207,284	50,151,379	510,963
Other kinds..........do			5,886,383	247,837
Felt and felt sheathing		25,423		79,509
Fish and fishery products (not including bêche de mer, isinglass, and seaweed and agar-agar), pounds	196,438,400	9,458,440	192,766,585	14,992,105
Flour..........pounds	346,242,800	7,509,146	606,798	
Fodder..........do	123,867	1,004	2,976,126	14,032
Foodstuffs, unclassed				688,588
Fruits:				
Dried..........pounds	11,616,667	555,635	13,662,633	1,044,697
Fresh..........do	29,015,600	476,267	33,322,983	996,662
Furniture, and materials for making		424,768		1,338,981
Gas fittings				316,102
Gasoline, benzine, naphtha, petrol, etc...........gallons	465,577	78,583	1,194,290	668,490
Ginseng..........pounds	446,421	1,202,410	465,661	4,140,489
Glass, window..........boxes	311,950	832,258	156,271	1,794,958
Glass and glassware		794,625		726,819
Gloves, leather..........pairs	58,845	18,545		
Glue..........pounds	1,942,533	197,504	2,205,728	516,429
Glycerine..........do				
Groundnuts..........do	44,568,267	1,036,898	93,527,900	4,142,070
Gums and wax (not including paraffin wax), pounds			3,973,723	514,139
Gums (myrrh, olibanum, etc)..........pounds	2,191,600	99,753		
Gypsum..........do			525,732	7,710
Haberdashery		811,495		1,196,554
Hair, animal, and feathers..........pounds	1,987,000	96,546		
Hair, feathers, and wool..........do			1,495,463	306,025
Hemp..........do	2,841,600	179,023	2,083,861	288,231
Hides, cow and buffalo..........do	2,295,867	280,389		
Hides and skins, undressed..........do			3,648,124	1,046,003
Honey..........do	267,200	28,326	268,799	33,374
Hops..........do	41,600	16,097	58,400	17,813

Imports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Horns:				
Deer ... pounds	68,400	$78,957	...	$442,193
Rhinoceros ... do	166,933	49,135	1,676	105,450
Hosiery ... dozens	2,109,301	1,395,089	1,913,001	2,233,440
India-rubber and gutta-percha ... pounds	34,800	11,801	41,733	23,607
India-rubber and gutta-percha, manufactures of all kinds (including boots and shoes)	...	262,826	...	877,868
Instruments, musical:				
Automatic	...	155,863	...	157,729
Pianos, etc	...	133,291	...	150,799
Instruments and apparatus, scientific (including medical, optical, and surgical)	...	539,114	...	387,434
Isinglass ... pounds	720,667	195,357	832,399	214,170
Ivory ... do	31,557	60,251	89,580	222,103
Jadestone ... do	517,867	129,513	564,665	308,598
Jewelry, real and imitation (including goldware and silverware)	...	102,542	...	298,130
Lace and trimmings	...	564,264	...	616,924
Lamps and lampware	...	1,000,595	...	811,630
Leather ... pounds	14,572,667	5,233,433	16,328,093	11,205,367
Manufactures of (not including gloves, machine belting, and boots and shoes)	...	277,094	...	260,975
Imitation, and oilcloth[a]	...	143,873	...	107,957
Liquid fuel ... tons	12,065	91,201	18,204	403,502
Looking-glasses and mirrors	...	274,623	...	541,560
Lungngans ... pounds	1,392,933	69,251	5,313,053	570,246
Macaroni and vermicelli ... do	13,305,467	578,945	9,574,776	1,130,272
Machine tools	...	36,781	...	395,364
Machinery:				
Agricultural	...	82,158	...	195,876
Propelling (as boilers, turbines, etc.)	...	468,170	...	770,705
For the textile industries (as carding, color-printing, weaving, spinning, etc., except cotton gins)	...	610,074	...	1,968,538
For brewing, distilling, sugar refining, etc.	...	35,370	...	23,087
Other kinds, and parts of machinery	...	3,940,228	...	5,577,131
Machines, embroidering, knitting, and sewing	...	644,638	...	336,826
Malt ... pounds	1,029,467	39,549	457,066	47,678
Manures ... do	121,140,933	691,439	112,537,185	897,328
Margarine and artificial butter ... do	77,733	9,981	9,600	2,473
Matches ... gross	28,448,155	4,622,704	13,340,821	5,494,274
Match-making materials	...	1,158,541	...	...
Match-making materials (not including paraffin wax)	...	...	...	1,962,104
Mats, all kinds (not including matting) ... pieces	6,468,232	366,092	4,292,911	667,554
Meats, prepared or preserved	...	...	...	463,731
Meats, prepared or preserved (including lard and preserved game and poultry)	...	239,482	...	...
Medicines (including cocaine and morphia)	...	...	...	6,114,717
Medicines (including worm tablets)	...	2,935,591	...	...
Milk, condensed, in tins ... dozens	483,720	570,135	352,178	820,477
Molasses ... pounds	...	...	10,459,574	153,892
Mushrooms ... do	2,158,607	483,099	2,475,994	1,049,785
Needles ... thousands	4,929,710	761,932	2,512,412	2,954,481
Oil, kerosene:				
American ... American gallons	112,459,925	10,460,946	48,249,297	15,296,400
Borneo ... do	23,603,943	2,510,457	11,700,691	3,265,156
Japanese ... do	34,265	3,836	1,947,970	658,296
Russian ... do	5,970,271	858,246	...	...
Sumatra ... do	41,915,648	4,685,189	48,527,206	14,561,219
Other kinds ... do	...	...	17,865	8,525
Oil cake ... pounds	42,933	617	...	...
Oils:				
Lubricating ... American gallons	2,449,586	516,472	...	...
Lubricating ... gallons	...	...	5,360,028	2,180,197
Vegetable ... do	...	...	862,067	830,384
Vegetable of all kinds (not including essential oils)	1,590,876	1,266,405	...	...
Oil tanks and fittings	...	...	...	10,218
Opium:				
Malwa ... pounds	1,386,253	17,312,417	...	...
Patna ... do	832,317	10,208,035	...	...
Benares ... do	190,199	2,288,550	...	...
Other kinds ... do	9,576	96,774	44,415	620,467
Paper, including cardboard ... do	129,512,933	4,462,130	72,202,619	7,620,056
value	...	764,257	...	1,021,516
Pearls, real	...	...	...	20,095
Pepper, black and white ... pounds	6,931,333	722,755	6,381,051	1,205,807

[a] This class for year 1918 does not include oilcloth for flooring.

Imports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Perfumery and cosmetics		$325,392		$1,326,371
Photographic materials		229,437		476,012
Plants and flowers, living		21,733		54,816
Potatoes...pounds	2,063,333	18,122		
Printing and lithographic materials				465,130
Printing and lithographic materials (not including machinery)		291,816		
Railway materials:				
Sleepers...number			1,015,122	1,350,218
Not otherwise classified				1,693,764
Rattans, whole, split, and peeled...pounds	17,992,267	592,413	12,634,295	749,007
Safes and strong-room doors		85,117		167,954
Saltpeter...pounds	7,991,600	302,612	330,799	49,285
Sandalwood...do	11,168,800	585,227	16,135,560	2,118,998
Scales and balances		59,316		107,629
Seaweed and agar-agar...pounds	84,797,067	1,249,513	106,173,201	2,655,706
Seeds, all kinds...do	6,938,533	350,975	7,060,782	728,504
Ships and boats, and materials for (not included in metals or timber)		71,828		30,840
Shoes and boots, leather...pairs	292,632	340,799	806,246	3,020,615
Shooks for making casks				1,332,916
Silk and cotton ribbons		376,523		75,783
Silk and silk products				153,143
Skins (furs)...pieces	592,195	211,334	1,998,566	1,161,527
Soap		1,957,008		
Soap, and materials for making				3,644,528
Soda...pounds	65,160,667	822,173	29,585,393	1,924,897
Soy...do			5,580,519	280,372
Spirits of wine...gallons			940,652	533,361
Starch...pounds	337,200	10,338	459,732	30,800
Stationery		941,237		1,383,990
Stone (marble, granite, etc.)				174,791
Stores, household		2,996,431		2,286,124
Stoves and grates		226,801		100,332
Sugar:				
Brown...pounds	303,670,067	6,733,659	314,495,080	11,587,249
White...do	257,742,267	7,752,079	258,763,620	14,436,566
Refined...do	350,387,600	10,637,942	550,040,358	42,149,125
Candy...do	36,421,467	1,343,737	41,871,095	3,285,637
Cane...do	20,434,533	114,468	20,485,815	205,946
Sulphur...do	4,063,600	55,021	5,122,121	145,546
Sulphuric acid...do	2,848,533	46,524		
Tea:				
British India and Ceylon...do	19,572,667	2,868,284	1,877,729	300,449
Japan (Formosa)...do	1,858,133	80,756	1,132,397	152,496
Java...do	4,466,800	541,118		
Other kinds...do			3,338,392	656,445
Telegraph and telephone materials		524,480		565,288
Thread, gold and silver, imitation...pounds	86,400	88,565	22,933	90,592
Timber:				
Hardwood...cubic feet	2,660,682	782,936	3,869,121	2,925,198
Softwood...square feet	159,602,884	2,829,305	103,687,730	4,202,727
Tinfoil and other foils...pounds	706,000	285,433	1,355,863	480,650
Tobacco...do	215,448	2,604,396	24,145,406	6,701,163
Tobacco...value				38,019
Tobacconists' sundries		182,320		282,313
Toilet requisites		653,812		754,914
Tools, hand		199,511		733,585
Toys and games		217,917		850,191
Trunks and suitcases				387,888
Turpentine...gallons	34,328	16,932		
Umbrellas:				
European...number	776,331	352,747		
European and American...do			287,066	273,962
Japanese...do	2,265,119	709,989	2,436,788	1,285,849
Other kinds...do			28,543	20,951
Varnish...pounds	1,087,133	141,019	555,065	106,037
Vegetables, dried and fresh (including potatoes)...pounds			13,037,701	371,926
Vegetables, dried and fresh (not including potatoes, beans, and peas)...pounds	12,152,400	284,935		
Vehicles:				
Locomotives and tenders		560,330		850,324
Railway carriages and wagons (including tramcars)		870,297		2,388,125
Traction and road engines		2,184		486
Motor cars		353,698		1,518,666
Motorcycles		9,416		39,277
Velocipedes (bicycles, etc.)		76,950		153,923
Other kinds		710,335		432,501

Imports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Waters, aerated and mineral		$144,698		$196,612
Wax, paraffin, pounds			14,698,490	1,548,753
Wines, beer, spirits, etc.:				
Beer and porter		527,925		1,341,214
Spirits		811,200		
Spirits (not including spirits of wine)				1,680,753
Wines		884,133		1,766,114
Other beverages		39,088		126,845
Wood pulp, pounds	4,883,467	80,907	4,963,854	269,518
Woods of all kinds not otherwise enumerated				1,202,146
Woods of all kinds (not including sandalwood, timber, and dyewoods)		843,297		
Woodware				250,652
Woodware (not including furniture and machinery)		99,735		
Postal parcels not otherwise classified		1,759,778		3,990,802
Sundries, unenumerated		11,502,606		4,515,225
		252,845,730		423,726,149
Less excess of reexports over imports		20,615		208,725
Total sundries		252,825,115		423,517,424
Grand total		415,648,504		661,987,447

The following table shows the imports during 1904:

Imports.	1904	
	Qantity.	Value.
COTTON GOODS.		
Shirtings, gray, plain:		
American, pieces	231,888	$409,341
Dutch, do	2,000	3,740
English, do	3,538,035	6,788,679
Indian, do	7,405	15,639
Japanese, do	6,401	10,484
Sheetings, gray, plain:		
American, do	2,003,791	4,677,854
Dutch, do	4,000	9,622
English, do	547,457	1,286,828
Indian, do	51,318	100,190
Japanese, do	214,502	420,652
Shirtings, white:		
Plain, do	2,767,971	7,555,393
Figured, brocaded, striped, and spotted, pieces	7,094	20,256
Drills:		
American, do	1,309,718	3,438,092
Dutch, do	9,610	22,772
English, do	120,949	290,011
Indian, do	65,529	154,222
Japanese, do	159,999	400,891
Jeans:		
American, do	158,151	337,887
Dutch, do	10,638	18,238
English, do	360,682	740,539
T cloths:		
32 inches—		
Dutch, do	3,401	6,028
English, do	534,101	761,674
Indian, do	57,851	60,740
Japanese, do	225,534	223,434
36 inches—		
English, do	230,825	394,112
Indian, do	1,358	2,560
Japanese, do	876	804
Cambrics, lawns, and muslins, white, dyed, and printed, pieces	203,598	155,351

Imports.	1904	
	Quantity.	Value.
COTTON GOODS—contd.		
Lenos and balzarines, white, dyed, and printed, pieces	82,363	$139,668
Chintzes and plain cotton prints, pieces	377,520	633,121
Printed drills, furnitures, and twills, pieces	95,458	134,429
Printed sateens, reps, etc., pieces	80,896	366,215
Printed T cloths, pieces	191,787	258,476
Turkey-red and dyed T cloths, pieces	525,565	881,603
Italians, plain, fast black, pieces	1,297,461	5,078,679
Lastings:		
Plain, pieces	344,186	1,285,704
Figured, do	1,651,364	3,148,146
Shirtings:		
Dyed, plain, do	76,193	211,923
Hongkong-dyed, plain, pieces	158,421	328,253
Dyed, figured, brocaded, and spotted, pieces	75,166	208,428
Spanish stripes, 64 inches, pieces	44,091	133,439
Flannel:		
Plain, dyed, and printed, pieces	529,969	1,384,179
Same, Japanese, do	131,675	292,946
Striped, do	56,204	115,712
Same, Japanese, do	55,396	89,217
Fancy woven cottons, yards	1,622,689	117,677
Japanese cotton cloth, yards	1,477,254	64,878
Japanese cotton crêpe, yards	1,262,975	69,038
Velvets, 22 inches, yards	2,897,594	490,467

Imports.	1904	
	Quantity.	Value.
COTTON GOODS—contd.		
Velveteens:		
18 inches and 26 inches, yards	309,105	$40,314
Embossed, and dyed velvet cords..yards..	627,741	153,776
Blankets..........pieces..	522,694	228,642
Handkerchiefs....dozens..	582,086	189,862
Handkerchiefs, Japanese, dozens	29,265	8,744
Towels:		
Honeycomb and huckaback.......dozens..	377,955	108,243
Same, Japanese..do....	158,635	61,917
Other kinds.....do....	603,595	196,915
Cotton goods, unclassed....	....	352,571
Cotton yarn:		
English......pounds..	1,096,733	253,839
Hongkong......do....	647,333	82,522
Indian.........do....	217,171,067	29,599,482
Japanese........do....	86,163,867	11,149,426
Other...........do....	39,067	18,100
Wooloa or berlinette.do....	16,667	7,714
Cotton thread:		
In balls.........do....	41,200	14,850
On spools.......gross..	256,243	415,934
Total cotton goods....	....	86,610,147
WOOLEN AND COTTON MIXTURES.		
Alpacas, lusters, and orleans............yards..	657,406	114,885
Union and poncho cloth, yards	343,034	144,721
Union Italian cloth. pieces.	40,987	283,609
Woolen and cotton flannel..............yards..	91,482	19,792
Woolen and cotton mixtures, unclassed..yards..	511,098	159,545
Total woolen and cotton mixtures...	....	720,952
WOOLEN GOODS.		
Blankets and rugs, pounds	572,654	188,185
Bunting............pieces..	1,242	4,252
Camlets:		
Dutch..........do....	4	45
English.........do....	55,553	448,306
Cloth, broad, medium, habit, and Russian, yards	390,313	398,532
Flannel...........yards..	117,745	28,223
Lastings..........pieces..	34,849	227,007
Long ells...........do....	132,823	513,933
Spanish stripes.....yards..	757,732	333,147
Woolen goods, unclassed, yards	448,274	219,252
Woolen and worsted yarn and cord.......pounds..	982,400	538,629
Total woolen goods..	....	2,904,601
MISCELLANEOUS PIECE GOODS.		
Canvas.............yards..	449,521	78,529
Gunny cloth........do....	2,239,842	94,974
Linen goods and mixtures, yards	94,856	12,473
Plushes............pounds..	378,288	434,241
Silk piece goods and mixtures............pounds..	263,197	692,096
Silk-stripe cotton cloth, Japanese.......pounds..	43,183	19,511
Miscellaneous piece goods, unclassed	....	35,459
Total miscellaneous piece goods........	....	1,367,283

Imports.	1904	
	Quantity.	Value.
METALS.		
Brass and yellow metal:		
Bars, rods, sheets, plates, and nails, pounds	2,438,400	$340,461
Wire.........pounds..	398,533	53,368
Unclassed.......do....	1,447,200	124,167
Copper:		
Bars, rods, sheets, plates and nails, pounds	4,137,733	732,199
Ingots, slabs, and ore, pounds	32,383,600	4,918,586
Wire.........pounds..	199,867	36,739
Unclassed.......do....	2,082,400	424,832
Iron and mild steel, new:		
Anchors, anvils, chains, and forgings, pounds	1,395,600	46,306
Bars.........pounds..	21,868,400	342,499
Castings, rough..do....	32,133	750
Cobbles and wire shorts, pounds......	16,281,467	215,877
Hoops..........do....	5,429,067	112,391
Nail rod.........do....	32,126,800	523,221
Nails and rivets.do....	14,526,133	324,916
Pig and kentledge, pounds	10,613,467	86,505
Pipes and tubes, pounds	5,984,400	142,553
Plate cuttings, pounds	43,247,467	506,987
Rails.........pounds..	518,533	23,733
Sheets and plates, pounds	13,543,600	217,176
Wire.........pounds..	5,293,600	141,265
Unclassed.......do....	3,413,467	116,112
Iron and mild steel, old, pounds	91,371,067	907,234
Iron, galvanized:		
Sheets........pounds..	5,818,800	173,689
Wire...........do....	1,942,400	55,355
Lead:		
In pigs and bars.do....	21,826,933	652,689
Tea and sheet...do....	369,600	12,787
Nickel..............do....	253,733	98,201
Quicksilver..........do....	175,600	97,047
Spelter...............do....	1,910,133	90,483
Steel:		
Bamboo, bars, hoops, sheets, and plates, pounds	7,471,733	266,706
Tool, cast, wire, and wire rope...pounds..	938,000	90,908
Tin, in slabs........do....	8,526,667	2,041,397
Tinned plates.......do....	18,526,000	596,648
White metal or German silver...........pounds..	616,533	157,493
Zinc, sheets and plates, pounds	878,267	53,462
Metals, unclassed, pounds..	1,386,667	97,131
Total metals.........	....	14,821,873
SUNDRIES.		
Bags, all kinds.....pieces..	11,850,327	671,239
Betel nuts.........pounds..	7,743,067	206,921
Bêche de mer.......do....	4,746,533	804,585
Birds' nests..........do....	143,747	527,822
Books and charts..........	....	184,479
Boxes, fancy........gross..	116,662	118,314
Braid, llama............	....	416,525
Bran, rice........pounds..	308,221,067	1,613,537
Building materials and fittings	....	175,610
Butter and cheese.........	....	237,931
Buttons, brass and fancy, gross	1,367,848	400,519
Candles..................	....	392,768
Carpets and carpeting.....	....	43,137

Imports.	1904	
	Quantity.	Value.
SUNDRIES—continued.		
Carriages, bicycles, etc., and materials..........	....	$126,771
Cement..........pounds..	34,959,600	191,565
Charcoal............do....	18,557,733	97,139
Chemical products (not including matchmaking materials, medicines, and soda)..........	....	159,404
Chinaware, fine and coarse (including crockery and earthenware)..........	....	208,377
Cigarettes..................	....	2,022,964
Cigars......................	....	266,276
Clocks and watches, number..................	301,469	457,069
Clothing, hats, etc. (not including boots and shoes)..........	....	479,231
Cloves and spices.pounds..	2,265,867	263,827
Coal................tons..	1,250,619	4,901,575
Coke................do....	10,084	96,576
Cordage..........pounds..	705,067	78,638
Cotton gins, and parts.....	....	152,216
Cotton, raw......pounds..	8,007,600	707,122
Cutlery and electroplated ware..................	....	67,273
Dyes, colors, and paints:		
Bark, mangrove, pounds..............	24,269,467	193,412
Cinnabar.....pounds..	368,133	150,182
Dyes, aniline..........	....	1,301,422
Indigo—		
Artificial.pounds..	2,509,200	699,279
Vegetable...do....	10,459,600	331,118
Sapanwood......do....	6,162,267	76,576
Vermilion.......do....	394,667	174,136
Dyes, unclassed.do....	8,457,067	235,722
Colors...........do....	1,704,133	77,408
Paints and paint oil, pounds..............	22,160,400	371,870
Electrical materials and fittings..................	....	242,260
Elephants' teeth and tusks..........pounds..	79,600	139,625
Enameled ware............	....	173,518
Fans, palm-leaf..number..	35,236,657	157,622
Fish and fishery products (not including bêche de mer, isinglass, and seaweed)..........pounds..	58,192,800	3,846,647
Flour...............do....	125,059,467	2,506,568
Fruits, dried...............	....	180,240
Furniture, and materials for making................	....	446,476
Ginseng..........pounds..	554,727	985,844
Glass, window.....boxes..	96,068	281,533
Glass and glassware........	....	535,622
Glue.............pounds..	973,200	91,382
Groundnuts.........do....	21,045,200	478,899
Haberdashery..............	....	288,638
Hardware..................	....	867,910
Hemp............pounds..	1,834,667	108,360
Hides, cow and buffalo, pounds..................	....	....
Horns:		
Deer..................	....	26,346
Rhinoceros...pounds..	5,067	194,747
Hosiery............dozen..	293,720	225,495
Isinglass..........pounds..	903,600	249,921
Jadestone...........do....	485,200	197,004
Jewelry, real and imitation.	....	87,575
Lace and trimmings.........	....	66,206
Lamps and lamp wire.......	....	836,999
Leather..........pounds..	1,832,267	575,325
Leather, manufactures of..	....	271,654
Lungngans.......pounds..	811,067	48,062
Macaroni and vermicelli, pounds..................	60,067	260,065
Machinery and fittings.....	....	1,856,707
Matches............gross..	22,854	20,932
Matches, Japan.....gross..	20,287,402	$3,310,760
Match-making material....	....	226,921
Mats of all kinds...pieces..	7,221,282	414,041
Medical and surgical appliances.................	....	90,356
Medicines.................	....	1,051,395
Milk, condensed, in tins, dozens..................	246,678	251,864
Morphia...........ounces..	128	198
Mushrooms.......pounds..	2,188,533	562,733
Needles.......thousands..	2,886,341	436,445
Oil:		
Engine.......gallons..	436,955	106,109
Kerosene—		
American...do....	67,063,705	9,224,006
Borneo......do....	343,620	34,828
Burma......do....	949,375	109,334
Russian.....do....	32,618,352	3,864,090
Sumatra....do....	55,916,183	6,256,556
Opium:		
Benares......pounds..	1,281,733	4,301,063
Malwa..........do....	2,945,333	11,235,744
Patna...........do....	2,660,800	9,186,182
Other kinds.....do....	414,267	1,168,742
Paper...............do....	30,912,800	1,779,224
Pearls, real................	....	49,930
Pepper, black and white, pounds..................	6,127,333	672;002
Perfumery.................	....	137,798
Photographic materials....	....	85,294
Printing and lithographic materials................	....	41,706
Railway plant and materials..................	....	4,220,428
Rattans..........pounds..	15,316,400	506,891
Rice.................do....	447,577,333	5,848,912
Saltpeter............do....	8,931,867	360,718
Sandalwood.........do....	16,643,200	758,492
Seaweed and agar-agar pounds..................	67,728,533	1,142,546
Seeds, all kinds...pounds..	4,148,138	147,529
Ships and boats, materials for, not entered under metals or timber........	....	402,304
Shoes and boots....pairs..	471,814	276,270
Silk and cotton ribbons....	....	294,268
Skins (furs)........pieces..	373,821	100,442
Soap......................	....	635,914
Soda.............pounds..	16,572,800	277,875
Stationery................	....	397,536
Stores:		
Household............	....	1,041,288
Marine and engineers'.	....	198,395
Sugar:		
Brown.......pounds..	185,205,067	3,837,960
Candy...........do....	26,046,400	968,767
Refined..........do....	168,148,267	4,773,429
White...........do....	120,275,333	3,180,302
Sulphur............do....	5,015,600	112,871
Tea:		
British India and Ceylon, pounds..........	1,553,200	157,823
Japan (Formosa), pounds..............	734,667	27,901
Java.........pounds..	36,533	3,825
Telegraph materials........	....	199,605
Thread, gold and silver, imitation.......pounds..	72,267	102,970
Timber:		
Hardwood .cubic feet..	1,861,723	697,295
Softwood .square feet..	52,332,529	1,044,900
Tobacco..........pounds..	4,260,133	594,574
Tobacconists' sundries.....	....	211,128
Toilet requisites...........	....	113,12
Toys......................	....	76,365
Umbrellas:		
European....number..	153,712	66,577
Japanese........do....	1,375,465	399,361
Varnish..........pounds..	775,867	79,915

Imports.	1904		Imports.	1904	
	Quantity.	Value.		Quantity.	Value.
SUNDRIES—continued.			SUNDRIES—continued.		
Waters, aerated and mineral		$76,749	Imports from foreign countries by junk in addition to those included above		$40,243
Wines, beer, spirits, etc.:					133,735,625
Beer and porter		467,578	Less excess of free exports over imports		6,177
Spirits		351,858	Total sundries		133,729,448
Wines		630,665	Grand total		240,154,304
Woods of all kinds (not including sandalwood, timber, and dyewoods)		491,155			
Sundries, unenumerated		8,901,829			

STATISTICS OF EXPORTS.

The following table shows, by quantity and value, the Chinese goods exported to foreign countries from China during the years 1913 and 1918:

Exports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
COTTON GOODS.				
Shirtings, gray ... pieces			15,547	$101,985
Sheetings ... do			28,212	239,551
Drills ... do			17,434	137,515
Nankeens ... pounds	6,407,466	$1,719,384	6,243,451	3,238,643
Cloth, native, fancy ... pieces			511,483	1,513,542
Cotton yarn ... pounds			3,699,324	1,193,508
METALS AND MINERALS.				
Antimony:				
Regulus ... pounds	28,720,800	687,096	31,706,054	2,526,674
Crude ... do			3,759,057	142,946
Ore ... do	9,589,867	109,343	1,058,531	26,019
Copper ingots and slabs ... do			5,961,318	994,543
Iron:				
Bars, billets, and nail rod ... do	2,623,733	80,499	8,097,313	231,623
Pans ... do			2,174,661	112,723
Plates and sheets ... do			3,310,525	96,382
Rails ... do			5,043,854	127,231
Manufactures, unclassed ... do			27,695,131	808,778
Pig and unmanufactured ... do	142,841,467	962,356	373,868,932	19,960,199
Ore ... do	604,021,333	444,503	834,806,180	1,621,998
Lead ... do	92,400	2,000	1,022,664	146,191
Lead ore ... do	8,962,667	95,447	2,065,728	58,645
Quicksilver ... do	4,667	2,624	646,798	868,338
Tin, in slabs ... do	18,491,733	7,958,424	19,442,218	13,133,817
Tin compound ... do			438,666	26,505
Zinc (spelter) ... do	2,002,267	70,539	283,866	33,150
Zinc ore ... do	21,048,000	80,557	365,199	3,932
Metals and minerals, unclassed ... do	6,270,000	268,093	161,548,929	4,227,329
Ores, unclassed ... do	18,602,400	38,622	91,619,238	9,337,294
SUNDRIES.				
Alum, white ... pounds	2,644,800	31,050	5,367,987	196,851
Animals, living:				
Cattle ... number	86,565	2,244,224	28,852	1,031,216
Goats ... do	10,195	16,914	4,996	17,653
Horses ... do	1,882	65,159	461	20,499
Pigs ... do	277,848	1,983,277	259,512	2,557,243
Poultry ... do	2,779,543	461,289	2,875,505	791,263
Sheep ... do	44,073	133,129	23,714	154,120
Other kinds (including asses and mules ... number	162	3,128	2,241	169,741
Aniseed, star ... pounds	1,469,200	172,715	3,143,325	351,198
Arms and munitions				10,707
Arsenic ... pounds			85,600	8,879
Bags, all kinds ... pieces	9,810,615	292,390	6,771,283	531,885

Exports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Bamboo and bamboo ware		$830,511		$864,703
Bamboo shoots...pounds			879,998	56,417
Bananas...do			7,381,982	75,970
Bean cake...do	1,575,792,400	18,197,871	2,182,241,744	35,650,215
Bean curd...do	4.846,533	144,899	3,765,591	265,141
Beans:				
Black...do	1,376,795,200	16,983,422	13,481,633	295,796
Green...do			21,546,879	541,824
White...do			63,360,375	1,542,042
Yellow...do			849,479,343	17,106,454
Other kinds...do			230,250,891	4,402,072
Beer				67,148
Betelnuts...pounds			1,315,197	130,489
Bones...do	74,288,933	434,580	76,984,874	860,336
Books, printed...do	821,067	225,817	732,665	387,760
Bran...do	136,986,133	847,963	163,199,459	1,903,077
Brass foil...do			24,800	16,366
Brassware...do			422,799	286,859
Bricks and tiles...pieces	60,669,558	309,212	59,812,171	506,467
Bristles...pounds	7,028,667	3,233,360	9,548,109	7,972,180
Buttons, brass...do			35,200	24,879
Camphor...do	247,600	94,298	765,598	510,692
Candles...do			2,197,861	504,456
Canes (bamboo, etc.)...number			2,376,451	27,523
Cardamoms...pounds			11,467	3,920
Carpets...pieces			17,769	438,958
Carriages and jinrikishas				3,433
Cassia lignea...pounds	13,435,753	966,273	6,669,850	357,771
Cement...do			67,078,632	503,361
Cereals:				
Barley...do	35,434,800	304,799	4,653,722	57,031
Maize...do	7,414,800	70,790	9,747,576	156,386
Millet and kaoliang (sorghum)...do			122,871,426	2,858,143
Oats...do	9,107,200	92,368	2,239,194	42,664
Rice and paddy...do			4,437,456	138,493
Wheat...do	246,409,467	3,471,137	242,060,862	4,797,831
Other kinds...do	239,889,067	2,996,573	14,254,631	350,256
Charcoal...do			23,968,873	263,562
Chestnuts...do			720,532	30,291
China-root...do	2,798,000	111,315	2,999,593	220,558
Chinaware (not pottery and earthenware)...pounds			12,742,368	1,768,764
Chinaware, earthenware, and pottery...do	65,720,800	1,554,424		
Cigarettes...do	992.933	265,852	4,233,456	2,593,791
Cigars...thousands			951	7,530
Clothing:				
Chinese, and boots and shoes		599,367		1,080,498
Boots and shoes, leather...pairs			32,953	75,513
Caps, various...number			276,637	94,389
Coal...tons	1,489,182	4,805,625	1,708,149	9,719,247
Coke...do			93,483	1,366,984
Cordage, all kinds...pounds			5,322,253	277,655
Cosmetics				67,915
Cotton gins, and parts of				840
Cotton:				
Raw...pounds	98,505,300	11,835,755	172,278,769	45,199,593
Waste...do	7,480,400	255,899	4,461,189	262,013
Curiosities		663,655		150,422
Dates, black and red...pounds			6,199,651	365,906
Dyestuff...do			2,067,728	56,576
Egg, albumen and yolk...do	20,796,400	2,146,144	38,580,837	11,108,522
Eggs:				
Fresh and preserved...thousands	363,202	2,082,496	299,867	1,855,982
Frozen...pounds			1,743,196	226,981
Fans, all kinds...thousands	54,070	358,949	42,959	583,513
Feathers:				
Duck, fowl, etc...pounds	54,530,000	1,082,461	4,761,455	553,311
Ornamental		42,972		8,547
Fibers:				
Abutilon...pounds	139,067	3,680		
Coir...do			2,074,395	174,192
Hemp...do	10,788,400	456,378	19,817,817	2,168,601
Jute...do	14,053,866	521,458	11,293,572	548,588
Ramie...do	22,816,800	1,814,389	36,617,108	4,226,346
Firecrackers and fireworks...do	20,743,733	2.332,766	9,236,244	2,621,190
Firewood...do	299.754,933	550,047	370.775,206	1,372,955

Exports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Fish and fishery products:				
Fish—				
Fresh .... pounds..	28,115,600	1,384,236	1,754,662	290,171
Dried and salt .... do....			5,866,785	893,630
Cockles .... do....			410,399	3,711
Cuttle-fish .... do....			1,866,929	385,804
Prawns and shrimps .... do....			278,666	71,220
Sea blubber .... do....			977,198	41,969
Sharks' fins .... do....			20,267	14,467
Other kinds .... do....			2,853,193	418,730
Fishing nets .... do....	....	....	578,132	216,773
Flour:				
Potato .... do....	....	....	2,462,261	87,297
Wheat .... do....	....	....	268,252,529	10,033,795
Other kinds of cereals .... do....	18,560,800	444,772	2,805,861	88,832
Fodder (grass and hay) .... do....	....	....	17,323,557	319,837
Fruits:				
Dried and preserved, n. e. s .... do....	30,034,400	1,132,594	7,687,849	642,648
Fresh, n. e. s .... do....	73,173,733	1,083,277	22,081,278	413,643
Fungus .... do....	1,486,133	263,270	1,068,397	850,638
Furniture	....	129,500	....	194,670
Galangal .... pounds..	1,996,000	16,401	1,411,463	44,792
Garlic .... do....	....	....	24,415,139	866,724
Ginger, fresh and preserved .... do....	8,469,733	139,810	7,057,049	200,042
Ginseng .... do....	....	....	164,495	257,360
Glassware, bangles, etc .... do....	1,752,533	271,066	1,308,797	295,120
Glue, cow .... do....	....	....	1,018,664	160,932
Goldware and silverware .... do....	13,380	172,181	29,457	571,352
Grass cloth .... do....	2,073,333	1,141,837	1,905,595	2,285,564
Groundnut cake .... do....	....	....	11,161,439	190,974
Groundnuts:				
In shell .... do....	152,680,756	3,672,861	5,791,986	191,561
Kernels .... do....			61,963,704	2,615,762
Gypsum .... do....	11,133,200	94,174	15,257,295	105,419
Hair:				
Horse .... do....	2,753,200	390,667	1,432,796	469,101
Other animals .... do....			906,664	84,765
Human .... do....	3,667,867	771,542	1,917,595	402,888
Hams .... do....	....	....	4,061,723	716,664
Hats:				
Rush .... number..	6,305,180	61,314	878,763	41,977
Wood-shaving or chip .... do....	1,180,547	33,278	80,039	3,830
Honey .... pounds..	....	....	225,199	27,099
Horns:				
Buffalo and cow .... do....	1,152,800	48,463	1,099,464	61,598
Deer, young .... pairs..	2,162	114,105	1,695	105,316
Indigo, liquid .... pounds..	....	....	11,152,239	826,026
Ink, Chinese .... do....	84,933	33,967	127,200	93,680
Intestines	....	....	....	619,817
Joss sticks .... pounds..	7,881,333	269,095	7,564,914	459,292
Lace	....	....	....	1,138,973
Lard .... pounds..	....	....	15,974,627	2,199,943
Launches and boats	....	....	....	25,536
Lead:				
White .... pounds..	....	....	14,800	3,418
Yellow .... do....	....	....	163,466	28,423
Leather .... do....	2,468,533	432,501	8,589,991	1,355,992
Leather ware .... do....	....	....	398,932	242,710
Lichees, dried .... do....	....	....	3,524,658	655,038
Lily flowers, dried .... do....	5,550,667	276,408	3,289,458	352,271
Licorice .... do....	3,621,867	245,268	7,909,980	827,973
Lungngans, dried .... do....	....	....	1,309,997	183,915
Machinery	....	....	....	215,041
Mats (not including matting) .... pieces..	21,839,088	1,302,629	20,096,732	1,367,068
Matting .... rolls..	266,231	1,495,761	52,216	521,804
Meats:				
Fresh or frozen (beef, mutton, pork, etc.) .... pounds..	24,431,466	1,306,691	39,068,569	3,229,296
Prepared or preserved (including preserved game and poultry, but not hams or lard) .... pounds..	14,603,066	1,421,520	11,327,705	1,583,692
Poultry and game, fresh or frozen..do....	3,265,066	180,441	1,070,397	151,531
Medicines	....	2,762,223	....	3,886,879
Moss .... pounds..	....	....	99,066	37,402
Mushrooms .... do....	....	....	359,599	218,881
Musk .... do....	1,799	372,881	2,000	532,859
Nutgalls .... do....	7,419,333	780,328	6,046,518	1,228,964
Oil:				
Bean .... do....	65,575,600	2,720,637	303,621,508	29,862,630
Cottonseed .... do....	....	....	17,769,556	1,486,068

Exports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Oil—Continued.				
Groundnut.......pounds..	34,209,733	$2,065,256	78,750,070	$8,556,071
Rapeseed.......do....			739,598	81,888
Sesame seed.......do....			2,749,593	264,086
Tea.......do....			3,136,525	315,409
Wood.......do....			65,180,104	7,129,280
Vegetable, other kinds.......do....	65,769,067	3,585,054	14,919,963	1,300,848
Oils, essential (aniseed, cassia-leaf, etc.).......pounds..	1,004,000	871,084	1,447,996	1,709,241
Olives, fresh and salted.......do....			3,421,058	157,291
Oranges, fresh.......do....			22,031,278	472,495
Paper:				
First quality.......do....	33,263,333	2,319,345	7,925,847	1,409,945
Second quality.......do....			7,933,847	627,442
Joss.......do....			7,185,182	1,208,253
Mill.......do....			663,732	52,801
Other kinds.......do....			6,406,251	325,825
Pearls, real.......		5,632		41
Pears, fresh.......pounds..			2,673,327	54,213
Peas.......do....			34,874,713	780,524
Peel, orange and pomelo.......do....	602,267	43,249	455,999	74,484
Pens, Chinese.......number..			5,375,052	291,983
Persimmons, dried.......pounds..			4,292,123	198,724
Pipes, tobacco, brass and white metal.......number..			13,627	11,987
Plants and shrubs.......				41,403
Potash.......pounds..			2,453,461	135,142
Potatoes.......do....	20,778,133	106,856	7,702,514	88,123
Pottery and earthenware (not chinaware),.......pounds..			25,019,404	809,796
Rattans, whole, split, and peeled.......do....	2,646,400	100,616	1,933,862	150,392
Realgar.......do....			219,333	17,959
Resin.......do....			6,837,716	206,119
Rhubarb.......do....	2,245,466	159,518	812,798	95,756
Salt.......do....			702,752,110	2,163,062
Samshu.......do....	18,839,467	639,781	11,049,089	609,108
Samshu, medicated.......do....			6,101,985	617,213
Seed:				
Apricot (almonds).......do....	6,136,000	708,487	2,233,194	319,278
Cotton.......do....	24,332,533	162,093	22,040,345	274,064
Lily flower.......do....			929,864	150,905
Linseed.......do....			11,744,504	354,024
Melon.......do....	7,099,866	354,854	4,410,122	375,346
Rape.......do....	82,236,400	1,416,068	89,349,910	2,719,704
Sesame.......do....	271,286,267	9,019,329	31,213,655	1,399,847
Other kinds.......do....	100,744,800	1,365,846	35,465,778	1,145,111
Seed cake:				
Rape.......do....	175,059,867	1,029,409	53,072,801	605,829
Sesame.......do....			59,333	660
Other kinds.......do....			102,982,943	1,568,398
Silk:				
Raw—				
White—				
Not rereeled and not steam filature.......pounds..	1,548,933	3,557,057	554,532	2,465,175
Rereeled.......do....	2,740,400	7,688,823	1,927,195	10,807,442
Steam filature.......do....	9,112,267	33,244,147	8,132,513	56,989,476
Yellow—				
Not rereeled and not steam filature.......pounds..	2,351,067	3,547,508	1,648,129	4,867,560
Rereeled.......do....			160,666	810,342
Steam filature.......do....	159,867	325,224	425,732	2,514,920
Wild—				
Not filature.......do....	3,873,733	5,091,032	701,465	1,485,538
Filature.......do....	81,200	134,762	3,110,259	9,155,084
Cocoons.......do....	3,395,866	1,697,183	4,365,322	3,126,166
Waste.......do....	15,581,333	4,864,419	17,162,357	11,009,853
Cocoons, refuse.......do....	3,473,200	470,774	5,752,652	1,316,474
Embroidery.......do....			16,667	184,736
Piece goods.......do....	2,366,800	10,377,832	1,971,595	15,224,838
Pongees.......do....	2,233,200	4,839,152	2,636,260	7,336,280
Ribbons.......do....			667	4,216
Thread.......do....			35,467	183,272
Products, unclassed.......		615,826		384,950
Skins and hides, undressed:				
Buffalo and cow.......pounds..	66,405,066	11,069,387	52,751,601	16,070,516
Goat, untanned.......pieces..	7,153,693	2,965,359	8,940,671	6,883,596
Horse, ass, and mule.......pounds..	1,517,866	179,204	3,920,924	798,974
Sheep.......pieces..	552,425	171,190	716,262	536,450
Unclassed.......	55,451	41,226		25,747

Exports.	1913		1918	
	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.				
Skins, dressed:				
Goat, tanned ... pieces	639,992	$314,432	1,076,916	$1,020,499
Kid ... do	112,347	18,602	131,206	36,795
Lamb ... do	587,151	488,668	218,341	254,334
Unclassed ... do	447	354	33,548	12,809
Skins, dressed, made up:				
Dog: Clothing, mats, and rugs ... do	591,118	313,991	598,426	632,622
Goat—				
Clothing ... do	721	887	17	49
Mats and rugs ... do	328,577	261,386	133,145	189,699
Kid: Clothing ... do	93,483	100,843	167,983	245,818
Lamb: Clothing ... do	68,393	154,336	102,231	454,179
Sheep: Clothing, mats, and rugs ... do	41,618	34,041	15,702	43,032
Unclassed ... do	36,953	47,561	18,708	33,505
Skins (furs), dressed and undressed:				
Fox ... do	107,069	376,993	25,349	171,336
Marmot ... do	279,264	49,661	659,416	172,701
Raccoon ... do	226,787	90,465	83,217	79,096
Sable ... do	737	11,007	681	24,145
Weasel ... do	1,033,582	161,363	490,446	121,030
Tails, all kinds	7,237	7,907		55,973
Unclassed ... pieces	2,132,703	475,584	2,289,880	972,985
Soap				56,704
Soapstone ware ... pounds			59,467	8,347
Soda ... do			1,179,864	62,655
Soy ... do			820,531	45,871
Stone (marble, granite, etc.)				394,121
Straw braid ... pounds	13,471,600	3,698,977	7,111,716	4,972,017
Sugar:				
Brown ... do	14,468,267	324,227	22,508,077	886,948
White ... do	73,467	2,151	4,344,656	293,015
Candy ... do	12,800	644	52,533	4,962
Cane ... do	2,245,147	132,505	32,021,520	366,449
Tallow:				
Animal ... do	16,370,800	929,976	18,762,620	2,334,456
Vegetable ... do	29,466,400	1,652,615	21,717,412	2,533,776
Tea:				
Black ... do	73,027,733	10,488,757	23,328,208	6,837,424
Green ... do	36,979,066	7,938,567	20,094,616	8,403,472
Brick—				
Black ... do	57,442,533	4,937,524	8,765,578	1,375,973
Green ... do	23,360,133	1,220,413	1,255,730	130,123
Tablet ... do	1,312,400	148,034	8,400	1,471
Dust ... do	159,333	6,610	416,132	30,639
Leaf, unfired ... do			26,800	2,677
Thread and yarn, ramie ... do			766,265	194,968
Timber:				
Hardwood ... cubic feet		1,862,763	325,086	183,655
Softwood ... square feet			31,909,342	1,639,059
Poles ... number			933,919	2,104,083
Tinfoil ... pounds			177,600	175,664
Tobacco:				
Leaf and stalk ... do	20,268,533	1,863,232	25,300,070	2,620,360
Prepared ... do			8,620,512	2,236,202
Toys				21,024
Turmeric ... pounds			176,666	11,016
Turnips, dried and salted ... do			10,206,108	248,150
Umbrellas, paper (kittysols) ... pieces			2,220,761	567,578
Varnish ... pounds	1,790,933	613,313	2,282,794	1,198,654
Vegetables, fresh, dried, and salted, n. e. s. ... pounds	156,814,400	1,824,149	70,276,491	1,155,221
Vermicelli and macaroni ... do	37,876,267	2,022,229	24,317,006	1,816,419
Vermilion ... do			6,267	14,413
Vinegar ... do			5,473,586	60,843
Walnuts:				
In shell ... do			1,270,530	59,623
Kernels ... do			2,039,862	225,580
Wax:				
White ... do	613,200	113,749	672,798	346,711
Yellow ... do			92,666	35,439
Woodware (not including furniture)		168,916		665,990
Wool:				
Camels' ... pounds	4,400,933	580,705	5,109,054	1,840,619
Hair, goats' ... do	1,557,866	271,425	1,680,796	499,998
Sheep's ... do	37,368,266	4,000,419	42,404,694	12,260,189
Yeast ... do			4,135,456	176,818
Postal parcels not otherwise classified		219,878		1,210,942
Sundries, unenumerated		7,832,277		7,085,501
Total		294,009,743		579,658,456

The following table shows the exports during 1904:

Exports.	1904	
	Quantity.	Value.
Alum, white.....pounds..	5,596,800	$38,905
Aniseed, star........do....	1,116,267	72,361
Bamboo and bamboo ware.	....	672,395
Bean cake........pounds..	153,460,000	1,644,431
Beans................do....	256,496,133	3,438,910
Bones................do....	20,239,333	79,068
Bran.................do....	85,540,800	309,283
Bristles.............do....	5,106,533	1,743,569
Camphor..............do....	295,867	81,462
Cassia lignea........do....	10,143,733	738,481
Cattle, sheep, pigs, and goats...........number..	252,057	2,177,898
China root.......pounds..	2,217,600	54,687
Chinaware, earthenware, and pottery....pounds..	41,963,867	1,161,417
Cigarettes...........do....	369,333	162,767
Clothing, Chinese, and boots and shoes...........	....	1,152,911
Coal.................tons..	10,190	46,458
Cotton, raw......pounds..	163,811,733	17,311,493
Curiosities..................	....	197,584
Egg albumen and yolk ....pounds..	6,329,200	291,732
Eggs, fresh and preserved ....number..	145,324,088	861,266
Fans, all kinds......do....	53,743,533	427,743
Feathers, duck, fowl, etc. ....pounds..	9,855,467	818,618
Firecrackers and fireworks ....pounds..	17,990,000	1,897,098
Fish and fishery products..	....	675,352
Fruits of all kinds.........	....	1,246,214
Fungus..........pounds..	910,800	260,587
Galangal.............do....	2,278,933	20,519
Glassware, bangles, etc. ....pounds..	2,394,000	276,458
Gold and silverware. do....	12,105	188,319
Grass cloth..........do....	1,138,400	536,750
Groundnuts...........do....	13,112,667	236,999
Gypsum...............do....	8,908,133	23,428
Hair of all kinds...........	....	319,467
Hats:		
Rush........number..	1,491,654	22,915
Wood-shaving or chip ....number..	514,544	8,595
Hemp............pounds..	27,813,733	1,294,186
Hides, cow and buffalo ....pounds..	37,330,133	4,985,409
Horns:		
Cow and buffalo ....pounds..	1,123,733	40,690
Deer, young....pairs..	1,587	68,388
Joss sticks........pounds..	7,533,867	283,274
Lard (pork fat)......do....	7,269,600	516,479
Leather..............do....	2,335,600	276,849
Lily flowers, dried..do....	6,091,200	183,998
Licorice.............do....	2,098,933	121,356
Mats (not including matting)...........pieces..	17,135,718	793,235
Matting.............rolls..	473,440	2,365,970
Medicines...................	....	1,358,858
Minerals:		
Antimony and antimony ore...pounds..	15,511,067	235,728
Iron, pig and unmanufactured....pounds..	26,913,067	189,924
Quicksilver.....do....	46,400	21,626
Tin, in slabs....do....	6,718,800	2,234,150
Musk.................do....	2,047	298,876
Nankeens.............do..	3,731,200	1,000,533
Nutgalls.........pounds..	5,533,667	$520,906
Oil (bean, groundnut, tea, wood, etc.).....pounds..	61,225,467	2,986,333
Oils, essential (aniseed, cassia-leaf, etc.)...pounds..	629,067	386,476
Opium................do....	423,867	1,009,293
Paper................do....	40,958,267	2,629,157
Preserves........pounds..	1,648,267	96,546
Provisions and vegetables (not including eggs).......	....	1,466,360
Rhubarb.........pounds..	1,080,667	68,444
Safflower............do....	4,400	1,155
Samshu...............do....	17,990,667	408,668
Seed:		
Apricot.........do....	451,600	55,187
Cotton..........do....	69,156,000	310,939
Melon...........do....	3,772,533	170,272
Rape............do....	722,267	26,801
Sesame..........do....	17,244,533	874,079
Seed cake............do....	83,999,467	370,514
Silk:		
Raw—		
White.......do....	4,565,067	13,668,089
Yellow......do....	1,383,200	2,348,411
Steam filature ....pounds..	6,304,933	19,911,228
Wild........do....	4,470,267	6,883,444
Cocoons.........do....	1,468,667	660,068
Waste...........do....	8,919,067	2,108,913
Cocoons, refuse..do....	1,962,533	279,562
Piece goods.....do....	2,410,667	7,399,358
Shantung pongees ....pounds..	464,933	811,472
Products, unclassed...	....	561,710
Skins (furs), skin clothing, and rugs................	....	5,114,624
Straw braid......pounds..	11,481,333	3,142,968
Sugar:		
Brown...........do....	42,896,933	777,298
Candy...........do....	95,333	4,078
White...........do....	5,805,200	165,236
Tallow:		
Animal (beef)...do....	3,583,200	154,167
Vegetable.......do....	9,989,723	525,577
Tea:		
Black...........do....	99,866,933	11,564,322
Green...........do....	32,152,800	6,609,876
Brick—		
Black.......do....	54,029,467	2,496,039
Green.......do....	5,663,200	284,023
Tablet..........do....	606,667	80,541
Dust............do....	1,180,800	45,570
Timber and wood of all kinds.....................	....	970,455
Tobacco, leaf and prepared ....pounds..	21,423,467	1,790,649
Varnish..............do....	534,000	107,478
Vermicelli and macaroni ....pounds..	20,847,067	1,001,145
Wax, white..........do....	643,333	188,292
Wool:		
Camel's.........do....	3,246,123	331,225
Sheep's.........do....	34,796,800	3,212,436
Sundries, unenumerated...	....	7,383,237
Exports to foreign countries by junk in addition to those included above..	....	240,800
Total..............	....	167,161,705

The foregoing statistics, from the Chinese Maritime Customs returns, have been converted from Haikwan taels to United States currency at the following exchange rates for the tael: 1904, $0.698; 1913, $0.729; 1918, $1.193.

CHINA'S TRADE DEVELOPMENT EXPRESSED IN HAIKWAN TAELS.

In order to show the actual growth of Chinese commerce year by year for more than half a century, without the complicating factor of varying exchange rates, the following table is given, showing the net value of imports, exports, and total foreign trade, expressed *not* in United States currency but in the silver unit employed by the Maritime Customs Service—the *Haikwan tael:*

Years.	Net imports.	Net exports.	Total foreign trade.	Years.	Net imports.	Net exports.	Total foreign trade.
	Haikwan taels.	*Haikwan taels.*	*Haikwan taels.*		*Haikwan taels.*	*Haikwan taels.*	*Haikwan taels.*
1864....	51,293,578	54,006,509	105,300,087	1892....	135,101,198	102,583,525	237,684,723
1865....	61,844,158	60,054,634	121,898,792	1893....	151,362,819	116,632,311	267,995,130
1866....	74,563,674	56,161,807	130,725,481	1894....	162,102,911	128,104,522	290,207,433
1867....	69,329,741	57,895,713	127,225,454	1895....	171,696,715	143,293,211	314,989,926
1868....	71,121,213	69,114,733	140,235,946	1896....	202,589,994	131,081,421	333,671,415
1869....	74,923,201	67,143,988	142,067,189	1897....	202,828,625	163,501,358	366,329,983
1870....	69,290,722	61,682,121	130,972,843	1898....	209,579,334	159,037,149	368,618,483
1871....	70,103,077	66,853,161	136,956,238	1899....	264,748,456	195,784,832	460,533,288
1872....	67,317,049	75,288,125	142,605,174	1900....	211,070,422	158,996,752	370,067,174
1873....	66,637,209	69,451,277	136,088,486	1901....	268,302,918	169,656,757	437,959,675
1874....	64,360,864	66,712,868	131,073,732	1902....	315,363,905	214,181,584	529,545,489
1875....	67,803,247	68,912,929	136,716,176	1903....	326,739,133	214,352,467	541,091,600
1876....	70,269,574	80,850,512	151,120,086	1904....	344,060,608	239,486,683	583,547,291
1877....	73,233,896	67,445,022	140,678,918	1905....	447,100,791	227,887,197	674,988,988
1878....	70,804,027	67,172,179	137,976,206	1906....	410,270,082	236,456,739	646,726,821
1879....	82,227,424	72,281,262	154,508,686	1907....	416,401,369	264,380,697	680,782,066
1880....	79,293,452	77,883,587	157,177,039	1908....	394,505,478	276,660,403	671,165,881
1881....	91,910,877	71,452,974	163,363,851	1909....	418,158,067	338,992,814	737,150,881
1882....	77,715,228	67,336,846	145,052,074	1910....	462,964,894	380,833,328	843,798,222
1883....	73,567,702	70,197,693	143,765,395	1911....	471,503,943	377,338,166	848,842,109
1884....	72,760,758	67,147,680	139,908,238	1912....	473,097,031	370,520,403	843,617,434
1885....	88,200,018	65,005,711	153,205,729	1913....	570,162,557	403,305,546	973,468,103
1886....	87,479,323	77,206,568	164,658,891	1914....	569,241,382	356,226,629	925,468,011
1887....	102,263,669	85,860,208	188,123,877	1915....	454,475,719	418,861,164	873,336,883
1888....	124,782,893	92,401,067	217,183,960	1916....	516,406,995	481,797,366	998,204,361
1889....	110,884,355	96,947,832	207,832,187	1917....	549,518,774	462,931,630	1,012,450,404
1890....	127,093,481	87,144,480	214,237,961	1918....	554,893,082	485,883,031	1,040,776,113
1891....	134,003,863	100,947,849	234,951,712				

TRADE BETWEEN CHINA AND UNITED STATES.

Official United States statistics, received as this monograph was going to press, give the following totals for this country's imports from and exports to China, the several leased territories,[1] and Hongkong during the fiscal year ended June 30, 1919:

Sections of China.	Imports.	Exports.			Total trade.
		Domestic.	Foreign.	Total.	
China proper....................	$105,762,859	$82,618,254	$374,241	$82,992,495	$188,755,354
British leased territory..........	....	....	....	....	....
French leased territory..........	1,640	7,720	....	7,720	9,360
Kiaochow leased territory.......	189,746	75,103	12,503	87,606	277,352
Japanese leased territory........	22,365,206	9,405,694	2,597	9,408,291	31,773,497
Hongkong.........................	26,066,355	24,524,428	196,639	24,721,067	50,787,422
Total......................	154,385,806	116,631,199	585,980	117,217,179	271,602,985

The following table shows, by quantity and value, according to American figures, the exports from the United States to China during the fiscal years 1917 and 1918; Hongkong and the leased territories are shown separately:

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[1] The British leased territory embraces Weihaiwei in the Province of Shantung; the French leased territory embraces Kwangchow in the Province of Kwangtung; the Kiaochow leased territory is in the Province of Shantung; the Japanese leased territory embraces the Kwantung territory on the Liaotung Peninsula, comprising Port Arthur and Dairen.

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA.				
Abrasives:				
Wheels, emery amd other		$6,927		$8,459
All other		15,064		7,412
Agricultural implements, and parts of		2,100		4,942
Aluminum, and manufactures of		3,534		11,937
Art works: Paintings and statuary		4,229		4,573
Asbestos, manufactures of		4,681		30,908
Asphaltum, and manufactures of		17,175		45,452
Athletic and sporting goods		16,545		7,701
Babbitt metal ... pounds	7,212	1,191	49,735	19,144
Blacking (including shoe paste)		9,927		27,001
Bones, hoofs, and horns, unmanufactured		836		3,140
Brass:				
Bars, plates, sheets, etc ... pounds	3,500	1,068	16,719	6,863
Pipes and fittings				42,654
All other manufactures of		60,883		90,552
Breadstuffs:				
Bread and biscuit ... pounds	51,026	7,560	130,088	25,559
Oatmeal ... do	129,874	8,781	232,864	20,414
Preparations of, for table food		68,304		23,089
Wheat flour ... barrels	9,806	44,532	275	2,791
All other breadstuffs		4,503		4,162
Bronze, manufactures of		6,241		8,665
Brushes		5,164		9,774
Buttons, and parts of		3,351		1,198
Cars, automobiles, and other vehicles:				
Aeroplanes, parts of		13,141		
Automobiles—				
Commercial ... number	9	14,287	23	26,236
Passenger ... do	509	383,371	833	818,659
Parts of (not including engines, etc.)		54,753		60,134
Cars, passenger, freight, and other, and parts of—				
For steam railways—Freight and other		287,671		
For other railways		8,500		
Bicycles, tricycles, etc		14,216		10,786
Motor cycles ... number	92	16,943	77	13,822
All other		25,668		129,457
Celluloid, and manufactures of		6,264		4,350
Chemicals, drugs, dyes, and medicines:				
Acids		52,902		6,922
Baking powder ... pounds	55,784	17,794	34,491	13,358
Bark, extract of, for tanning		14,051		12,124
Copper, sulphate of (blue vitrol) ... pounds	179,802	14,944	380	65
Dyes, and dyestuffs		32,868		473,393
Ginseng ... pounds	12,763	74,049	47,727	329,013
Glycerine ... do			23,932	14,458
Infants' food				27,335
Medicinal, and pharmaceutical preparations		57,558		126,119
Petroleum jelly, etc		2,128		10,448
Roots, herbs, and barks, n. e. s		4,069		980
Soda, salts, and preparations of		77,408		198,047
All other		508,140		155,262
Chewing gum		7,389		8,861
Clocks and watches:				
Clocks and parts of		26,957		25,364
Watches and parts of		16,998		47,228
Cocoa and chocolate, etc		34,434		57,307
Coffee:				
Green or raw ... pounds	25,381	3,556	4,531	725
Roasted or prepared ... do	7,886	2,218	20,924	5,464
Confectionery		19,770		55,016
Copper:				
Refined, in ingots, bars, etc ... pounds	8,802	2,913	70,014	18,336
Pipes and tubes ... do			55,164	24,956
Plates and sheets ... do	25,863	10,766	26,793	9,554
Wire ... do	59,366	22,712	25,075	8,414
All other manufactures of		19,428		41,342
Cotton:				
Unmanufactured—Upland ... pounds	2,402,768	403,142	2,186,998	600,643
Manufactures of—				
Cloths—				
Unbleached ... yards	2,012,597	162,262	4,100,086	528,587
Bleached ... do	434,186	52,486	1,055,443	142,666

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA—continued.				
Cotton—Continued.				
Manufactures of—Continued.				
Cloths—Continued.				
Colored—				
Printed...pounds..	765,025	$87,819	1,068,532	$138,259
Dyed in the piece...do....	187,831	14,837	670,627	106,359
All other...do....	431,855	41,507	70,860	25,537
Wearing apparel—				
Corsets...		4,807		4,724
Knit goods...		114,055		62,108
All other...		50,910		34,147
Yarn...pounds..		17,729	80,386	81,653
All other...		132,296		93,255
Dental goods...		5,247		8,280
Earthen, stone, and china ware:				
Brick, fire...thousands..	90	4,796	14	759
Chinaware...		3,594		4,638
Earthen and stone ware...		3,664		5,748
Sanitary earthenware...		3,822		6,816
All other...		1,556		39,557
Electrical machinery and appliances (except locomotives):				
Batteries...		20,330		31,125
Dynamos or generators...		222,373		109,973
Fans...number..	1,639	32,570	5,613	115,976
Insulated wire and cables...		115,525		97,494
Interior wiring supplies, etc...		20,596		8,832
Lamps, incandescent—				
Carbon filament...number..	200	96	6,800	894
Metal filament...do....	443,070	89,692	126,493	27,437
Meters, and measuring instruments...		5,507		35,676
Motor...		126,143		141,595
Switches and accessories...				51,565
Telegraph apparatus (including wireless)...		14,567		
Telephones...		116,745		91,355
Transformers...		56,573		39,847
All other...		281,263		184,429
Explosives:				
Cartridges, loaded...		2,971		22,112
Dynamite...pounds..	96,500	21,384	45,000	18,970
Gunpowder...do....	6,481	3,292		
All other...		20,861		26,757
Fibers, vegetable, manufactures of:				
Cordage...pounds..	8,844	$1,989	8,605	$2,921
Twine (except binding)...		4,951		2,316
All other manufactures of...		11,239		14.143
Fire extinguishers...		6,467		3,315
Fish:				
Salmon, canned...pounds..	42,017	5,177	68,949	13,372
All other canned (except shellfish)...		5,693		32,004
All other...		5,579		11,633
Flavoring extracts and fruit juices...		2,491		10,948
Fruits and nuts:				
Fruits—				
Apples, dried...pounds..	70,680	5,872	50,290	5,709
Apples, green or ripe...barrels..	2,371	15,213	1,910	8,722
Lemons...boxes..	6,216	28,047	4,522	30,205
Oranges...do....	2,031	7,263	1,986	8,489
Peaches, dried...pounds..	62,556	4,326	20,973	2,335
Prunes...do....	171,325	13,798	157,242	17,142
Raisins, and other dried grapes...do....	77,393	8,009	179,313	19,308
All other green, ripe, or dried fruits...		10,937		15,965
Fruits, preserved—				
Canned...		67,229		69,981
All other...		5,269		19,157
Nuts...		6,869		11,665
Furniture, of metal...		47,315		66,964
Furs and fur skins, and manufactures of...		26,964		22,118
Glass and glassware:				
Bottles, demijohns, etc...		10,433		25,525
Cylinder, crown, and common window glass, ...box, 50 square feet..	34,565	135,823	5,244	32,814
Plate glass...square feet..	38,918	15,003	64,219	31,325
All other...				173,924

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA—continued.				
Glucose (corn syrup)....pounds..	464,771	$19,483	165,340	$9,864
Glue....do....	151,482	19,498	405,844	168,282
Gold and silver, manufactures of....	....	4,980	....	886
Jewelry....	....	7,604	....	2,648
Grease:				
Lubricating....	....	17,285	....	35,884
Soap stock and other....	....	13,923	....	2,259
Hats and materials for....	....	288	....	7,835
Honey....pounds..	....	1,900	27,213	6,374
Household and personal effects....	....	90,505	....	28,062
India rubber, manufactures of:				
Belting, hose, etc....	....	18,115	....	56,973
Boots and shoes....pairs..	4,488	4,008	1,729	1,589
Druggist's rubber sundries....	....	....	....	9,002
Tires for automobiles....	....	36,952	....	53,069
Tires, all other....	....	1,659	....	2,760
All other manufactures of....	....	25,805	....	43,147
Ink:				
Printer's....	....	86,063	....	116,232
All other....	....	7,306	....	5,130
Instruments and apparatus for scientific purposes:				
Medical and surgical....	....	3,798	....	9,005
Optical....	....	33,623	....	14,548
All other....	....	22,318	....	28,728
Iron and steel:				
Pig iron....tons..	80	5,263	564	26,860
Scrap and old, for manufacture....do....	2,664	65,863	823	46,811
Bar iron....pounds..	2,750,248	84,077	1,154,369	58,538
Bars or rods of steel—				
Wire rods....do....	406,386	20,223	1,097,798	35,099
All other....do....	33,244,294	1,085,894	40,825,799	2,144,799
Billets, ingots, and blooms of steel....tons..	56	5,886	....	....
Bolts, nuts, rivets, and washers....pounds..	829,596	45,963	2,150,912	182,653
Car wheels and axles....	....	87,846	....	215,511
Castings, n. e. s....	....	6,639	....	14,965
Chains....	....	....	....	36,803
Cutlery—				
Razors....	....	8,598	....	4,327
All other....	....	6,730	....	24,546
Enamel ware—				
Bathtubs....number..	792	15,298	574	14,925
Lavatories and sinks....	....	11,220	....	8,390
All other....	....	21,770	....	19,433
Firearms....	....	6,054	....	24,514
Forgings, n. e. s....	....	....	....	11,979
Hardware—				
Builders'—				
Locks....	....	41,683	....	58,608
Hinges and other....	....	135,685	....	111,465
Other hardware....	....	....	....	30,953
Hoop, band, and scroll....pounds..	5,915,245	285,866	7,308,877	508,312
Machinery, n. e. s.—				
Adding and calculating machines....number..	42	6,501	65	11,622
Air-compressing machinery....	....	3,600	....	4,461
Cash registers....number..	11	1,058	47	4,321
Concrete mixers....	....	....	....	4,756
Elevators and elevator machinery....	....	1,994	....	13,697
Engines, and parts of—				
Internal-combustion engines—				
Gas, stationary....number..	34	6,160	89	24,130
Gasoline—				
Marine....do....	48	16,660	44	36,107
Stationary....do....	73	20,755	89	30,436
Traction and caterpillar....do....	4	3,398	....	....
Steam engines—				
Locomotives....do....	19	475,243	22	292,475
Stationary....do....	6	1,826	47	37,352
All other engines....do....	26	16,837	43	26,274
Parts of....	....	11,494	....	317,943
Laundry machines....	....	111,020	....	3,970
Metal-working machinery....	....	19,245	....	109,769
Milling machinery, flour and grist....	....	58,507	....	46,616
Mining machinery—				
Oil-well machinery....	....	1,443	....	650
All other....	....	24,823	....	40,836
Paper and pulp mill machinery....	....	1,498	....	4,008

Exports from United States.	Year ended June 30— 1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA—continued.				
Printing presses		$31,407		$25,190
Pumps, and pumping machinery		48,979		65,900
Refrigerating machinery, etc		37,683		36,620
Sewing machines		101,875		140,755
Textile machinery		211,176		127,181
Typesetting machines		241		11,742
Typewriting machines		63,354		95,799
Sawmill machinery		188		2,675
Woodworking machinery, all other		11,107		69,146
All other machinery, and parts of		377,981		493,013
Nails and wood screws—				
Cut ... pounds	110,340	3,465	407,828	15,799
Wire nails ... do	20,228,121	807,860	20,607,294	1,068,822
All other (including tacks) ... do	406,152	41,834	687,263	78,949
Wood screws				106,108
Pipes and fittings—				
Cast ... pounds	611,985	21,582	1,777,980	104,285
Wrought ... do	2,887,000	164,032	4,372,669	356,725
Radiators, etc ... do	864,407	55,370	1,184,504	66,083
Railway track material—				
Railroad spikes ... do	416,122	16,161	112,199	3,743
Rails of steel ... tons	1,303	51,539	2,598	170,565
Switches, frogs, splice bars, etc		10,937		170,932
Safes ... number	1,020	55,765	183	13,303
Scales and balances		42,137		26,655
Sheets and plates—				
Galvanized iron and steel sheets ... number	1,869,986	95,361	2,986,553	279,563
Iron sheets and plates ... do	757,018	31,731	2,107,971	178,368
Steel—				
Plates ... do	17,773,850	786,461	18,872,498	1,496,216
Sheets ... do	3,230,482	114,156	7,913,894	660,223
Ship and tank plates punched and shaped ... do			1,077,543	74,297
Stoves and ranges, and parts of		11,841		34,306
Structural iron and steel ... tons	5,619	260,650	8,650	463,632
Tin plates and manufactures of—				
Tin plates, terneplates, and taggers' tin ... pounds	30,558,220	1,534,253	14,302,220	1,428,545
All other manufactures of		21,575		11,975
Tools—				
Files and rasps				44,039
Saws		11,144		22,293
All other		79,285		52,838
Wire and manufactures of—				
Wire—				
Barbed ... pounds	80,210	2,311	2,332	128
All other ... do	6,161,623	208,937	11,382,030	771,019
Manufactures of—				
Wire ropes and cables				23,717
Woven-wire fencing		3,231		3,586
All other		113,974		75,741
All other manufactures of iron and steel		342,506		427,408
Lamps, etc. (except electric)		74,517		86,824
Lead:				
Pigs, bars, etc.—				
From domestic ore ... pounds	1,412,147	111,319	320,169	22,798
From foreign ore ... do	1,456,122	114,469	224,600	14,609
Manufactures of		23,009		10,257
Leather:				
Belting		42,673		48,410
Carriage, automobile, and upholstery		182		2,053
Patent		29,937		15,639
Sole ... pounds	1,687,227	808,534	334,413	185,442
Upper—				
Calf ... square feet	235,616	117,852	172,848	85,488
Kid ... do	266,078	135,866	592,447	249,511
Grain and split ... do			10,884	2,319
All other upper				39,430
All other leather		64,808		62,042
Manufactures of—				
Boots and shoes—				
Children's ... pairs	9,457	9,708	14,826	26,963
Men's ... do	46,887	152,782	54,797	226,460
Women's ... do	15,084	42,588	29,697	83,376
All other		9,909		10,694
Leather, imitation		3,098		10,132
Malt ... bushels	21,894	25,948	4,288	10,464

Exports from United States.	Year ended June 30— 1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA—continued.				
Meat and dairy products:				
Meat products—				
Beef, canned...pounds..	32,031	$9,136	10,802	$4,161
Tallow...do....	107,407	10,959		
Lard compounds, and other substitutes, etc...do....	289,632	43,531	18,234	3,642
Stearin, from animal fats...do....	265,251	36,060	24	9
All other meat products—				
Canned...		17,221		20,534
All other...		19,370		35,922
Dairy products—				
Butter...pounds..	231,882	86,683	36,334	19,405
Cheese...do....	122,846	26,915	232,422	71,104
Milk, condensed...do....	4,495,800	497,663	3,666,776	575,120
Metal polish...		2,263		4,301
Metals, n. e. s...				9,990
Mucilage and paste...		810		7,583
Musical instruments:				
Organs...number..	114	5,934	88	3,921
Pianos...do....	81	19,298	109	25,950
All other...		8,906		17,085
Naval stores:				
Rosin...barrels..	1,926	13,910	7,933	62,243
Tar, turpentine, and pitch...do....	103	607	454	2,009
Turpentine, spirits of...gallons..	11,494	6,661	31,812	19,721
Nickel:				
Nickel, nickel oxide, etc...pounds..	6,720	2,700	69,246	34,848
Manufactures of...		431		16,554
Notions...		60,888		17,081
Oakum...pounds..			25,920	3,476
Oilcloth and linoleum:				
For floors...square yards..	7,547	4,563	110,926	58,632
All other...		31,767		48,152
Oils:				
Animal...gallons..	190	200	11	31
Mineral—Refined or manufactured—				
Gas oil and fuel oil...do....	2,846,377	117,085		
Illuminating...do....	80,620,189	4,925,006	40,642,901	2,881,733
Lubricating...do....	2,104,446	408,193	2,828,598	564,874
Naphthas—				
Gasoline...do....	92,906	17,562	188,648	50,022
All other...do....	57,000	14,877	1,010	323
Residuum...do....			109	8
Vegetable—				
Fixed or expressed—				
Cottonseed...pounds..	30,534	4,718	25,812	5,170
Linseed or flaxseed...gallons..	18,431	16,832	2,449	3,851
All other...		25,100		4,440
Volatile or essential...		6,556		3,752
Paints, pigments, colors, and varnishes:				
Dry colors—				
Lampblack...		6,530		76,677
All other...		39,280		38,006
Ready-mixed paints...gallons..	69,761	90,289	62,913	82,432
Varnish...do....	7,506	8,634	8,423	15,075
White lead...pounds..	76,514	7,689	101,636	12,448
Zinc, oxide of...do....	18,927	1,841	17,931	2.249
All other (including crayons)...		35,983		62,315
Paper stock: Rags, n. e. s., and other (except wood pulp)...pounds..	415,520	5,450	67,209	1,109
Paper:				
Books, music, maps, etc...		195,107		220,180
Boxes and cartons...		3,378		23,988
Carbon paper...		7,250		5,549
Paper board and strawboard...		43,627		132,236
Paper hangings...		747		1,098
Playing cards...		63,233		113,050
Printing paper—				
News print...pounds..	615.539	23,072	2,647,942	147,194
All other...do....	1,852,934	184,350	1,335,936	148,005
Tissue and toilet paper...		(a)		23,231
Wrapping paper...pounds..	630,661	48,936	303,524	33,552
Writing paper and envelopes...		21,205		43,410
All other...		158,656		387,800
Paraffin and paraffin wax...pounds..	14,450,258	582,800	11,361.870	861,948
Pencils, and pencil leads...		2 674		9,939
Perfumeries, cosmetics, etc...		73,535		110,752
Phonographs, etc.:				
Phonographs, graphophones, etc...number..	938	54,858	1,071	33,376
Records and accessories...		18,519		11,057

[a] Included in "All other paper" prior to 1918.

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA—continued.				
Photographic goods:				
Cameras		32,450		35,575
Motion-picture films ... linear feet	1,324,844	46,748	351,944	18,746
Other sensitized goods		22,992		20,577
All other		23,376		17,759
Plated ware		3,288		21,141
Quicksilver ... pounds	6,755	7,550		
Refrigerators		56,317		6,792
Roofing felt and similar materials		66,543		84,337
Shoe findings		10,689		9,462
Silk, manufactures of		29,515		49,174
Soap:				
Toilet		69,332		61,965
All other ... pounds	1,510,173	66,757	1,176,059	71,086
Spirits, wines, or fancy liquors, and other beverages:				
Malt liquors, in bottles ... dozen quarts	28,925	34,466	17,459	31,560
Spirits, distilled—				
Rum ... proof gallons	22,158	7,990	30,299	16,703
Whisky, rye ... do	5,576	8,503	6,827	15,667
All other ... do	2,438	8,160	10,117	25,704
Wines ... gallons	87,857	85,192	386,190	182,295
All other		4,916		6.609
Sponges ... pounds	68	160	13,655	9,141
Starch ... do	140,946	5,920	101,527	7,417
Stone, and manufactures of		5,420		16,013
Sugar and molasses:				
Molasses and sirup ... gallons	2,651	2,008	2,234	2,447
Sugar, refined ... pounds	291,039	24,702	63,478	6,166
Surgical appliances (not including instruments)		30.791		28,613
Suspenders and garters				10,479
Tobacco:				
Unmanufactured—Leaf ... pounds	9,887,842	1,712,960	7,959,312	2,584,731
Manufactures of—				
Cigarettes ... thousands	4,579,120	9,097,712	5,398,871	9,339,526
Plug ... pounds	68,712	15,952	4,060	1,507
Smoking ... do	46,425	36,434	16,002	11,363
All other		4,651		4,617
Toys		7,975		25,441
Trunks, valises, and traveling bags		5,761		6,113
Vegetables:				
Beans and dried peas ... bushels	2,903	11,223	551	4,150
Pickles and sauces		12,790		33,414
Canned		147,751		50,409
All other		1,835		2,086
Wax:				
Beeswax ... pounds	100,178	33,930	175	58
Manufactures of		1,000		14,121
Wood:				
Lumber—				
Boards, etc.—				
Fir ... thousand feet	21,348	271,397	8,121	168,452
All other ... do	6	258	6	660
Shooks—				
Box		40,166		16,674
All other ... number	82,199	122,063	46,869	132,349
Staves ... do	434,193	22,990		
Heading		19,132		
All other		8,625		1,016
Doors, sash, and blinds		3,834		731
Furniture		31,217		46,772
Hogsheads and barrels, empty		190,062		39,842
Incubators and brooders		553		45,245
Wood pulp ... tons	557	29,055		
All other manufactures of		25,628		20,493
Wool, manufactures of:				
Blankets				6,229
Cloths and dress goods ... yards			45,018	80,526
Wearing apparel		26,561		18,816
All other manufactures of		98,612		50,102
Zinc:				
Rolled in sheets, etc ... pounds	518,664	87,382	627,653	125,997
All other manufactures of		3,597		1,822
All other articles		46,664		91,523
Total		36,547,279		43,104,781
Total foreign exports		648,329		371,842
Total exports		37,195,608		43,476,623

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA: BRITISH LEASED TERRITORY.				
Cotton, manufactures of				$242
Glass and glassware				1,267
Iron and steel:				
Typewriting machines				3,423
Nails and wood screws				1,041
Dairy products: Milk—Condensed and evaporated, pounds			43,500	5,500
Quicksilver...pounds			2,700	4,700
All other articles				4,173
Total domestic exports		$342		21,346
TO CHINA: FRENCH LEASED TERRITORY.				
Breadstuffs:				
Preparations of, for table food		3,734		212
All other breadstuffs		237		209
Brooms				4,185
Cars, automobiles, and other vehicles:				
Automobiles—				
Passenger...number	20	9,325	2	2,017
Parts of (not including engines)		1,747		
Bicycles, tricycles, etc		223		268
Chemicals, drugs, dyes, and medicines: Dyes and dyestuffs		4,185		
Cotton, manufactures of:				
Cloths, colored...yards	9,836	1,685	21,293	4,261
All other		2		3,828
Iron and steel:				
Bar iron...pounds			85,760	3,263
Bars or rods, of steel...do	444,045	11,366		
Bolts, nuts, rivets, and washers...do	14,580	1,163	999	123
Hardware—Builders		1,555		
Machinery, machines, and parts of—				
Engines, and parts of—Internal combustion engines—Gasoline—				
Marine...number	12	1,219	2	190
Traction and caterpillar...do	1	878		
Typewriting machines		4,234		1,969
All other		11,427		3,669
Nails, wire...pounds	2,030	108	120,000	8,499
Sheets—Galvanized iron and steel...do	34,270	2,750	4,400	380
Structural iron and steel...tons	122	7,151		
Tools, n. e. s		1,237		
Wire, and manufactures of		1,489		
All other manufactures of iron and steel		1,902		4,470
Lamps (except electric)		340		1,092
Dairy products: Milk—Condensed and evaporated, pounds			153,950	28,250
Oilcloth and linoleum		1,607		1,368
Oils: Mineral, refined or manufactured—				
Illuminating...gallons	978,370	97,391	1,525,450	215,823
Lubricating, and heavy paraffin...do	23,647	5,463	128,609	36,319
Naphthas, etc.—Gasoline...do	95,000	25,794		
Paints				1,470
Paper, and manufactures of		1,614		222
Spirits, wines, malt liquors, etc.—Whiskey—Rye...proof gallons	504	1,300		
All other articles		2,711		11,772
Total domestic exports		203,187		333,750
Total foreign exports				200
Total exports		203,187		333,950
TO CHINA: KIAOCHOW LEASED TERRITORY.				
Iron and steel: Machinery, machines, etc		1,577		
Pipes and fittings—Cast...pounds			100,855	3,875
Iron sheets and plates...do			94,470	12,973
Oils: Mineral, refined—Illuminating...gallons	2,400,490	242,050		
All other articles		433		6,266
Total domestic exports		244,060		23,112

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA: JAPANESE LEASED TERRITORY.				
Abrasives		$44,933		
Agricultural implements:				
Hayrakes and tedders		4,256		
Mowers and reapers		14,390		
All other, and parts of		821		
Cars, automobiles, and other vehicles:				
Automobiles—Passenger.....number	33	17,796	10	$7,321
Cars, for railways		46,000		
All other		1,472		244,777
Chemicals, drugs, dyes, etc.:				
Acids		37,734		2,960
Dyes and dyestuffs		37,452		17,896
Ginseng.....pounds			1,586	10,500
Soda, salts, and preparations of		178		3,083
All other		36,623		57,928
Cocoa and chocolate, prepared, etc		6,459		21,556
Coffee, green or raw.....pounds	19,500	2,670	39,452	6,000
Cotton, manufactures of:				
Cloth, bleached.....yards	194	9	38,250	11,814
Cloths, colored, printed, etc.....do	598,324	47,312	372,232	94,212
Wearing apparel—				
Knit goods		71,559		12,257
All other		9,796		3,216
All other		7,980		12,853
Electrical machinery, appliances, etc.:				
Dynamos or generators (electric)		9,171		15,909
Meters and other measuring instruments (electric)		2,105		1,636
Motors		1,500		24,593
Telephones		4,334		2,539
All other		23,928		112,968
Fibers, vegetable, manufactures of:				
Twine, binder.....pounds			287,435	37,445
All other		1,777		117
Fly paper		4,553		
Fruits:				
Apples, dried.....pounds	24,000	2,136	3,860	446
Prunes.....do	31,625	2,425	6,880	980
All other, green or ripe		5,901		4,243
Prepared or preserved—				
Canned		6,402		1,450
All other		1,040		681
Furs, raw or unmanufactured		100		18,840
Glass and glassware:				
Cylinder, crown, and common window glass.....box, 50 square feet	800	3,508		
All other		2,258		79
Glucose (corn sirup).....pounds	298,968	15,054	13,629	720
Glue.....do	28,270	6,163		
Grease, lubricating		192		1,900
Iron and steel:				
Scrap and old.....tons	51	397	163	3,653
Bar iron.....pounds			415,890	18,970
Bars or rods of steel.....do	203,829	6,374	9,845,083	539,952
Billets, ingots, and blooms of steel.....tons	164	18,286		
Bolts, nuts, rivets, and washers.....pounds			56,340	9,793
Car wheels and axles				154,827
Firearms		4,014		3,620
Forgings, n. e. s				31,872
Hardware—				
Builders'—				
Locks		18,598		24
Hinges and other		19,003		4,039
Other hardware				3,364
Hoop, band, and scroll (iron, etc.).....pounds	431,034	13,113	384,930	27,916
Machinery, machines, and parts of—				
Air-compressing machinery		1,092		318
Elevators, and elevator machinery				3,615
Engines, and parts of		2,513		11,062
Flour and grist-mill machinery				5,408
Metal-working machinery		15,340		4,216
Meters, gas and water		3,728		
Printing presses		4,150		
Sewing machines		11,031		16,560
Textile machinery		10,500		
All other machinery, and parts of		37,047		36,474
Nails and wood screws—				
Wire nails.....pounds	2,665,722	110,574	2,550,198	135,599
All other (including tacks).....do	52,520	5,367	14,450	1,465

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA: JAPANESE LEASED TERRITORY—contd.				
Iron and steel—Continued.				
Pipes and fittings—				
Cast ..... pounds	57,300	$2,379	10,697,428	$304,920
Wrought ..... do	2,435,550	69,985	291,178	16,082
Radiators, etc ..... do	266,398	14,491	19,601	1,045
Rails for railways (steel) ..... tons	345	20,025		
Railway track material, etc		1,725		110,027
Sheets and plates—				
Galvanized iron and steel sheets ..... pounds			56,273	4,712
Iron ..... do	156,667	8,405		
Steel plates ..... do	110,100	5,882	3,002,574	169,169
Steel sheets ..... do			713,588	61,387
Ship and tank plates, punched and shaped ..... do			235,160	13,610
Structural iron and steel ..... tons	72	4,938	86	7,556
Tin plates and manufactures of—				
Tin plates, terneplates, and tagger's tin ..... pounds	66,339	3,714	8,400	1,050
All other manufactures of		11,854		53
Tools—				
Shovels and spades		29,684		1,462
All other		69,927		14,337
Wire ..... pounds	88,359	3,627	37,040	1,663
All other manufactures of iron and steel		34,061		45,268
Leather:				
Belting		1,100		2,743
Patent		6,749		8,320
Sole ..... pounds	1,886,186	1,048,870	532,315	317,515
Upper—				
Calf ..... square feet	89,782	40,049	412	212
Kid ..... do	102,182	56,561	63,440	30,803
All other leather		12,080		4,951
Manufactures of—				
Boots and shoes—				
Children's ..... pairs	8,093	11,571	25,314	70,013
Men's ..... do	104,759	354,397	471,203	1,608,065
Women's ..... do	7,287	19,266	30,073	78,341
All other manufactures of		2,450		1,285
Meat and dairy products:				
Meat products—				
Beef products, tallow ..... pounds	98,083	12,602		
Lard compounds and substitutes ..... do	703,540	104,666		
Stearin from animal fats ..... do	531,820	71,882		
Dairy products—				
Cheese ..... do	14,447	4,523	484	130
Milk—Condensed ..... do	160,800	18,360	223,805	33,057
All other		1,938		
Naval stores:				
Rosin ..... barrels	2,229	16,232		
Turpentine, spirits of ..... gallons	7,000	5,000		
Oils: Mineral, refined, or manufactured—				
Illuminating ..... do	2,187,750	230,244	770,680	95,339
Lubricating and heavy paraffin ..... do	10,695	1,476	61,490	26,390
Paints, pigments, colors, and varnishes:				
Varnish ..... do	1,666	3,328	116	158
White lead ..... pounds	116,480	11,800		
All other (including crayons)		4,412		1,346
Paper:				
Playing cards		2,903		5,780
Printing paper ..... pounds	32,500	3,504		
All other		3,208		599
Paraffin ..... pounds	2,833,624	196,260		
Pencils (except slate) and pencil leads		2,475		
Photographic goods		4,588		3,592
Plated ware (except cutlery and jewelry)		39,051		78
Roofing felt and similar materials		21,806		12,032
Shoe findings		9,448		39
Silk, manufactures of		5,522		2,406
Soap, toilet and other		4,742		438
Vegetables		1,061		3,014
Wood:				
Timber, sawed ..... thousand feet	785	14,909		
Lumber—				
Boards, planks, etc ..... do	100	1,700	1,366	34,276
Shooks—				
Box				21,250
All other ..... number	68,560	129,456	73,025	180,930
Staves ..... do	73,796	4,565	42,000	3,210
All other manufactures of		2,131		4,946

Exports from United States.	Year ended June 30— 1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO CHINA: JAPANESE LEASED TERRITORY—contd.				
Wool, manufactures of:				
Wearing apparel		$6,421		$296
All other		8,648		5,349
Zinc—Rolled in sheets, etc ... pounds	19,152	4,053		
All other articles		18,231		86,785
Total domestic exports		3,566,605		5,165,147
Total foreign exports		455,303		477,270
Total exports		4,021,908		5,642,417
TO HONGKONG.				
Abrasives		1,770		6,594
Agricultural implements, and parts of		1,938		1,712
Animals		240		365
Asbestos, manufactures of		2,636		10,453
Asphaltum, manufactures of		4,251		12,546
Athletic and sporting goods		967		8,026
Brass:				
Bars, plates, sheets, etc ... pounds	54,606	15,704	49,748	18,517
Pipes and fittings ... do			23,146	27,208
All other manufactures of		37,387		30,071
Breadstuffs:				
Bread and biscuit ... pounds	25,717	3,158	39,751	7,821
Oatmeal ... do	187,983	13,773	67,752	7,965
Preparations of, for table food		59,778		18,437
Wheat flour ... barrels	61,800	306,756	1,250	13,825
All other breadstuffs		10,010		10,390
Brushes		1,934		3,841
Cars, automobiles, and other vehicles:				
Automobiles—				
Commercial ... number			8	5,371
Passenger ... do	38	35,255	117	91,228
Parts of		2,885		7,702
Motor cycles ... number	37	7,531	18	3,070
All other		6,132		5,427
Chemicals, drugs, dyes, and medicines:				
Acids		3,688		2,723
Baking powder ... pounds	10,859	3,184	18,893	7,001
Dyes and dyestuffs		2,591		47,268
Ginseng ... pounds	180,243	1,282,151	123,390	832,212
Infants' food				12,661
Medicinal, and pharmaceutical preparations		21,659		12,395
Petroleum jelly, etc		2,507		4,024
Soda, salts, and preparations of		24,883		49,163
All other		89,192		31,790
Chewing gum		637		1,997
Clocks, and parts of		16,155		25,168
Watches, and parts of		511		5,142
Cocoa and chocolate, prepared, etc		4,911		12,454
Confectionery		13,402		21,012
Copper:				
Pipes and tubes ... pounds			68,722	29,682
Plates and sheets ... do	35,482	10,247	14,671	5,290
All other manufactures of		13,630		8,929
Cotton:				
Unmanufactured—Upland and other ... pounds			2,204,028	610,977
Manufactures of—				
Cloth—				
Unbleached ... yards	149,520	37,694	87,008	21,369
Bleached ... do	382	46	85,719	22,731
Colored—				
Printed ... do	106,905	15,941	92,497	15,469
Dyed in the piece ... do	22,536	3,733	157,739	20,245
All other ... do	455,327	52,856	253,322	63,931
Wearing apparel—				
Knit goods		15,544		15,933
All other		17,919		14,008
Yarn ... pounds		11,360	26,221	16,913
All other		93,724		41,258
Dental goods		1,166		8,890
Earthen, stone, and china ware		719		6,641
Electrical machinery, appliances, and instruments:				
Dynamos or generators (electric)		1,135		41,806
Fans (electric) ... number	1,131	22,083	2,414	57,544
Lamps (electric) ... do	17,330	4,210	49,922	11,366

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO HONGKONG—continued.				
Electrical machinery, appliances, and instruments—Continued.				
Meters, and other measuring instruments (electric)		$10,749		$2,401
Motors (electric)		14,762		27,182
Switches and accessories				6,393
Transformers (electric)		3,023		38,440
All other		19,528		47,719
Explosives:				
Dynamite ... pounds	50,000	11,677	30,000	10,150
Gunpowder ... do	47,785	37,790	25,000	18,200
All other		2,436		14,600
Fibers, vegetable, manufactures of		5,914		7,210
Fish:				
Dried—				
Cod, haddock, etc ... pounds	46,700	5,654	76,019	11,113
All other ... do	6,920	306	6,575	1,130
Canned—				
Salmon ... do	74,585	9,579	86,208	14,678
All other		3,189		
All other fish and fish products		624		12,850
Fruits and nuts:				
Fruits—				
Apples, green, or ripe ... barrels	3,151	15,158	1,940	8,986
Apricots, dried ... pounds	80,530	12,367	11,593	2,163
Raisins, and other dried grapes ... do	65,904	6,177	121,111	11,871
All other green, ripe, or dried fruits		9,289		16,904
Fruits, preserved—				
Canned		16,441		20,831
All other		1,662		10,026
Nuts		1,185		7,473
Furniture of metal		12,814		11,796
Glass and glassware:				
Bottles, vials, etc. (glass)		6,267		10,071
Cylinder, crown, and common window glass, ... box, 50 square feet	14,342	60,570	2,446	12,890
Plate glass ... square feet	198,502	69,538	23,441	9,221
All other		15,611		12,000
Glucose (corn sirup) ... pounds	120,036	5,498	169,375	9,975
Grease:				
Lubricating		9,300		10,682
Soap stock, and other		2,521		
Household and personal effects		13,605		19,323
India rubber, manufactures of:				
Belting, hose, etc		6,954		5,682
Tires—				
For automobiles		3,252		6,412
All other		4,132		1,076
All other manufactures of		4,616		9,957
Ink		2,658		4,373
Instruments and apparatus for scientific purposes		2,522		8,658
Iron and steel:				
Pig iron ... tons	300	6,000	840	37,678
Scrap and old, etc. (iron, etc.) ... do	752	17,933	1,011	36,961
Bar iron ... pounds	391,418	10,167	13,835,067	752,775
Bars or rods of steel—				
Wire ... do	238,980	9,951	1,648,118	77,477
All other ... do	18,124,572	585,828	34,975,825	1,812,318
Billets, ingots, and blooms of steel ... tons	382	61,214	777	75,494
Bolts, nuts, rivets, and washers ... pounds	884,176	52,184	2,468,326	178,403
Cutlery—				
Razors		4,731		11,007
All other		78,323		11,363
Enamelware		2,248		5,320
Firearms		2,783,756		664
Forgings, n. e. s				49,268
Hardware—				
Builders'—				
Locks		24,093		13,093
Hinges and other		28,114		12,599
Other hardware				3,440
Hoop, band, and scroll (iron, etc.) ... pounds	225,646	12,145	450,615	37,409
Machinery, machines, and parts of, n. e. s.—				
Adding and calculating machines ... number	4	810	10	2,883
Engines, and parts of—				
Steam, locomotives ... do	2	24,000	3	11,740
All other ... do	36	4,309	127	55,533
Parts of		9,211		46,642

Exports from United States.	Year ended June 30— 1917 Quantity.	1917 Value.	1918 Quantity.	1918 Value.
TO HONGKONG—continued.				
Iron and steel—Continued.				
Machinery, machines, and parts of, n. e. s.—Continued.				
Metal working machinery		$2,391		$15,565
Mining machinery		4,325		1,167
Pumps and pumping machinery		4,970		28,526
Refrigerating machinery		4,396		9,733
Sewing machines		18,250		50,401
Textile machinery		9,658		10,214
Typewriting machines		9,218		13,928
Woodworking machinery		4,767		6,831
All other		70,270		65,911
Nails and wood screws—				
Cut nails ....pounds	222,163	11,791	8,000	660
Wire nails ....do	15,487,776	530,900	10,020,552	578,212
Wood screws				20,476
All other (including tacks) ....pounds	243,179	32,337	358,176	61,633
Pipes and fittings—				
Cast ....do	26,561	1,205	13,077	883
Wrought ....do	1,162,035	55,213	682,247	57,628
Radiators ....do	92,563	6,452	11,682	1,038
Railway track material—				
Rails of steel ....tons			1,134	66,358
Switches, frogs, etc.		798		21,492
Scales and balances		11,217		6,884
Sheets and plates—				
Galvanized iron and steel sheets ....pounds	536,959	21,974	1,258,414	114,373
Iron sheets and plates ....do	2,107,467	86,289	7,561,348	673,486
Steel—				
Plates ....do	19,717,569	807,664	30,252,849	2,658,264
Sheets ....do	1,041,867	45,964	3,973,054	353,780
Ship and tank plates, punched and shaped, pounds			2,392,249	234,800
Structural iron and steel ....tons	4,010	245,961	2,102	274,474
Tin plates and manufactures of—				
Tin plates, terneplates, and taggers tin ....pounds	22,169,791	1,173,017	23,182,552	2,206,662
All other manufactures of		21,086		11,262
Tools, n. e. s.—				
Axes ....number	288	132	6,168	4,987
Auger bits and drills				1,368
Files and rasps				11,995
Hammers and hatchets		511		1,055
Saws		5,240		7,153
Shovels and spades		1,671		665
All other		23,464		13,012
Wire, and manufactures of—				
Wire—				
Barbed ....pounds	8,460	466	169,672	7,629
All other ....do	5,258,685	267,541	9,211,356	539,462
Manufactures of—				
Wire ropes and cables				11,887
Woven-wire fencing				119
All other		40,279		5,498
All other manufactures of iron and steel		112,012		136,024
Lamps, etc. (except electric)		8,009		12,511
Lead: Manufactures of		417		6,203
Leather:				
Belting		4,976		10,968
Patent		5,402		601
Sole ....pounds	145,393	71,708	4,613	3,287
Upper—				
Calf ....square feet	80,548	37,674	98,009	56,238
Kid ....do	10,036	6,664	8,454	3,997
All other upper		168,467		17,208
All other leather		15,787		1,390
Manufactures of—				
Boots and shoes—				
Children's ....pairs	2,723	2,965	1,751	2,658
Men's ....do	10,152	25,870	8,840	34,315
Women's ....do	10,752	22,390	9,752	28,376
All other, including slippers ....do	3,795	4,034	1	14
All other		2,094		3,144
Meat and dairy products:				
Meat products—				
Beef products—				
Beef, canned ....pounds	55,026	12,202	16,064	5,801
Oleomargarine, imitation butter ....do	33,546	4,537		

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO HONGKONG—continued.				
Meat and dairy products—Continued.				
Meat products—Continued.				
Hog products—				
Hams and shoulders, cured...........pounds..	11,029	$3,138	11,039	$3,604
Pork, canned...........do....	5,518	1,461	7,314	3,220
Lard compounds, and other substitutes, etc., pounds........	1,238	207	2,189	842
Sausage...........pounds..	14,806	3,629	15,412	5,887
All other........		10,321		18,483
Dairy products—				
Butter...........pounds..	13,260	5,611	3,810	2,161
Cheese...........do....	84,887	18,091	159,769	47,911
Milk, condensed...........do....	5,801,270	576,708	5,515,114	855,216
Metal compositions, n. e. s.:				
Babbit metal...........do....	1,120	139	88,632	19,957
All other........				35,688
Moss........				14,457
Musical instruments, and parts of........		3,904		47,330
Naval stores:				
Rosin...........barrels..	366	2,810	504	3,743
All other........		128		1,109
Nickel:				
Nickel, nickel oxide, and matte...........pounds..	13,899	8,375	31,000	17,980
Manufactures of........		14,620		
Notions........		5.124		9,614
Oilcloth and linoleum........		1,872		7,483
Oils:				
Animal...........gallons..			30	20
Mineral, refined or manufactured—				
Gas and fuel...........do....	391,104	6,798		
Illuminating...........do....	21,012,149	1,276,303	8,054,286	588,395
Lubricating and heavy paraffin...........do....	643,561	135,601	1,420,972	382,858
Vegetable—				
Fixed or expressed........		1,483		2,436
Volatile or essential—				
Peppermint...........pounds..	685	1,742	510	1,230
All other........				69
Paints, pigments, colors, and varnishes:				
Dry colors........		376		21,228
Ready-mixed paints...........gallons..	3,244	4,925	5,197	10,000
All other (including crayons)........		10,639		29,844
Paper stocks: Rags, and other, etc...........pounds..	1,468,074	56,680	2,807,608	48,772
Paper:				
Books, music, maps, etc........		16,956		46,090
Paper hangings........		4,571		30
Playing cards........		26,451		35,140
Printing paper—				
News print...........pounds..	346.010	11,394	253,030	11,986
All other...........do....	9,241	1,292	103,870	10,640
Writing paper and envelopes........		7,194		5,247
All other........		183.790		159.211
Paraffin and paraffin wax...........pounds..	497,734	30.303	3,407,860	124,689
Perfumery........		17,832		42,005
Phonographs, graphophones, gramophones, and records, and materials for:				
Phonograph, graphophones, etc...........number..	168	8,002	282	5,569
Records and materials for........		8,065		3,077
Photographic goods:				
Motion-picture films (exposed)...........linear feet..	73,800	5,611	623,105	37,056
All other sensitized goods........		4,436		6,219
All other........		6.490		6,279
Plated ware........		2.126		2,492
Quicksilver...........pounds..	93,625	99.861	85,000	107,510
Roofing felt and similar materials........		6.908		4,347
Seaweed........		23,317		
Shoe findings........		2,275		7,514
Silk, manufactures of........		1,968		8,257
Soap:				
Toilet........		12,275		36,739
All other...........pounds..	444,427	23,583	214,604	11,921
Spirits, wines, malt liquors, and other beverages:				
Malt liquors—In bottles...........dozen quarts..	3,833	5,553	5,846	8,714
Spirits, distilled...........proof gallons..	512	1,221	314	283
Wines...........gallons..	16,823	6,677	145,427	72,215
Other beverages........		1,010		536
Starch...........pounds..	29,146	1,862	109,632	6,506

Exports from United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO HONGKONG—continued.				
Surgical appliances, not including instruments		$3,001		$2,438
Suspenders and garters				6,926
Tobacco:				
Unmanufactured—Leaf ... pounds	3,324,572	706,995	5,277,665	1,957,776
Manufactures of—				
Cigarettes ... thousand	109,275	195,258	221,996	397,526
Plug ... pounds	9,132	2,414	5,860	1,178
Smoking ... do	17,740	10,558	556	361
All other		25		1,966
Toys		2,077		4,598
Wax, manufactures of		5		22,262
Vegetables:				
Beans and dried peas ... bushels	1,152	7,004	726	4,967
Pickles and sauces		3,442		24,473
Canned		12,833		17,150
All other		1,735		529
Wood:				
Logs and other round timber ... thousand feet	44	2,110	41	3,092
Lumber—				
Boards, planks, and scantlings—				
Fir ... do	1,478	19,615	202	6,024
All other ... do	10	300		
Shooks—				
Box		650		146,277
All other ... number			979	5,092
Staves ... do			50.000	1,750
All other		300		3,580
Furniture		4,429		5,878
All other manufactures of		4,947		12,936
Wool, and manufactures of		28,980		25,830
Zinc:				
Rolled in sheets ... pounds	17,243	3,182	118,474	23,294
All other manufactures of		2		7,115
All other articles		37,800		67,914
Total domestic exports		14,147,157		20,197,596
Total foreign exports		77,118		78,042
Total exports		14,224,275		20,275,638
Grand total		55,889,380		69,773,086

The following table shows the exports from the United States to China during the fiscal year 1914, the last year before the outbreak of the Great War:

Exports from United States.	Year ended June 30, 1914.	
	Quantity.	Value.
TO CHINA.		
Domestic exports:		
Breadstuffs—		
Preparations for table food		$33,530
Wheat flour ... barrels	136,424	540,344
All other		11,561
Cars, carriages, other vehicles, and parts of—		
Automobiles—Passenger ... number	144	143,619
Cars, passenger, freight, and parts of		16,217
All other		28,397
Chemicals, drugs, dyes, and medicines—		
Medicines, patent or proprietary		28,631
All other		111,984
Copper, and manufactures of		79,788

Exports from United States.	Year ended June 30, 1914.	
	Quantity.	Value.
TO CHINA—continued.		
Domestic exports—Continued.		
Cotton, and manufactures of—		
Unmanufactured ... pounds	4,489,563	$588,240
Cloths—		
Unbleached ... yards	88,340,406	5,667,308
Bleached ... do	2,495,294	199,076
Colored ... do	3,311,763	258,939
All other manufactures of		91,281
Electrical machinery, appliances, and instruments—		
Fans ... number	959	23,581
Motors		23,577
All other		135,910
Fruits and nuts—		
Fruits—		
Green, ripe, or dried		46,085
Prepared or preserved		27,007
All other		5,006
Glass and glassware		21,496
Grease		20,117
Household and personal effects		108,027
India rubber, manufactures of		74,338
Ink		35,474
Iron and steel, and manufactures of—		
Bar iron ... pounds	897,121	21,116
Bars and rods of steel ... do	3,150,325	74,695
Builders' hardware		134,986
Machinery, machines, and parts of—		
Engines, and parts of—		
Steam—		
Locomotives ... number	29	328,629
Stationary ... do	102	136,307
All other engines, and parts of		79,081
Milling machinery		132,635
Typewriters		46,829
All other machinery, and parts of		283,417
Nails and spikes—		
Wire ... pounds	9,578,082	206,427
All other ... do	1,079,278	19,381
Pipes and fittings ... do	2,956,464	97,259
Rails for railways, steel ... tons	12,906	367,801
Sheets and plates—		
Iron ... pounds	1,771,365	60,100
Steel ... do	3,548,293	115,798
Structural iron and steel ... tons	1,589	94,644
Tin plates, terne plates, and taggers tin ... pounds	8,988,078	298,977
Tools, n. e. s		77,858
Wire, and manufactures of—		
Wire ... pounds	1,337,084	27,306
Manufactures of		30,557
All other manufactures of iron and steel		302,067
Lamps, chandeliers, etc. (except electric)		81,675
Lead, and manufactures of—		
Lead in pigs ... pounds		(a)
All other		56,599
Leather and tanned skins, and manufactures of—		
Leather and tanned skins		105,575
Manufactures of leather		38,316
Meat and dairy products—		
Meat products		35,114
Milk, condensed ... pounds	1,080,544	91,890
All other dairy products		14,446
Oils—Mineral, refined—		
Gas and fuel oil ... gallons	228,571	5,713
Illuminating oil ... do	88,006,918	6,348,612
Lubricating and heavy paraffin oil	1,324,303	212,560
Naphthas, etc ... do	174,325	33,639
Paints, pigments, colors, and varnishes		74,719
Paper and manufactures of—		
Books, music, maps, engravings, etc		143,743
All other		48,592
Paraffin, and paraffin wax ... pounds	8,375,860	317,686
Spirits, wines, malt liquors, and other beverages		29,869
Tobacco, and manufactures of—		
Unmanufactured—Leaf ... pounds	11,445,097	2,004,730
Cigarettes ... thousands	1,086,895	1,746,240
All other manufactures of		35,280
Vegetables		51,996

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a Not enumerated separately prior to 1915.

Exports from United States.	Year ended June 30, 1914.	
	Quantity.	Value.
TO CHINA—continued.		
Domestic exports—Continued.		
Wood, and manufactures of—		
Lumber—		
Boards, planks, and deals ... thousand feet	107,115	$1,164,790
Shooks—		
Box ... number	591,371	45,500
All other ... do	197,222	184,610
All other lumber		39,253
All other manufactures of wood		95,572
All other articles		436,486
Total domestic exports		24,662,116
Total foreign exports		36,618
Total exports of merchandise		24,698,734
TO CHINA: BRITISH LEASED TERRITORY.		
Total exports of merchandise (domestic)		4,047
TO CHINA: FRENCH LEASED TERRITORY.		
Domestic exports:		
Cars, etc.—Automobiles—Commercial ... number		
Chemicals, drugs, etc.—Medicines, patent, etc		182
Iron and steel, manufactures of—		
Machinery, etc.—Typewriting machines		1,733
Scales and balances		616
Oil—Mineral, refined—		
Illuminating oil ... gallons	1,503,000	149,616
Lubricating, and heavy paraffin oil ... do	26,500	5,300
Naphthas, etc.—		
Gasoline ... do	33,250	6,080
All other ... do		
All other articles		2,587
Total exports of merchandise (domestic)		166,114
TO CHINA: KIAOCHOW LEASED TERRITORY.		
Total exports of merchandise (domestic)		3,850
TO CHINA: JAPANESE LEASED TERRITORY.		
Domestic exports:		
Breadstuffs—Wheat flour ... barrels	159,051	625,602
Cars, etc.—Passenger and freight, and parts of		44,777
Chemicals, drugs, dyes, and medicines		253
Electrical machinery, appliances, and instruments—		
Dynamos or generators		10,263
Motors		13,898
All other		22,488
Fruits—		
Green, ripe, or dried		695
All other		5,149
Glass, and glassware		
Glue ... pounds		
Iron and steel, manufactures of—		
Bars or rods of steel ... do	371,522	4,845
Machinery, machines, and parts of—		
Engines and parts of—		
Steam—Locomotives ... number	4	42,500
All other, and parts of		20,154
Metal-working machinery		6,909
Sewing machines		6,670
All other, and parts of		56,693
Nails and spikes ... pounds	3,137,908	60,544
Pipes and fittings ... do	375,394	9,581
Rails for railways of steel ... tons	732	21,410
Sheets and plates—		
Iron ... pounds		
Steel ... do	415,369	7,128
Structural iron and steel ... tons	162	6,902
Tin plates, terneplates, and taggers tin ... pounds		
Tools, n. e. s		9,529
Wire, and manufactures of		3,706
All other manufactures of iron and steel		58,065
Leather and tanned skins, and manufactures of		897
Meat and dairy products—Condensed milk ... pounds	36,970	2,224

Exports from United States.	Year ended June 30, 1914.	
	Quantity.	Value.
TO CHINA: JAPANESE LEASED TERRITORY—Continued.		
Domestic exports—Continued.		
Oils—Mineral, refined—		
Gas oil and fuel oil....gallons..	....	....
Illuminating oil....do....	3,443,670	$821,841
Lubricating, and heavy paraffin oil....do....	121,492	15,409
Naphthas, etc....do....	76,000	14,583
Paper, and manufactures of....	....	7,054
Paraffin and paraffin wax....pounds..	523,983	19,734
Roofing felt and like materials....	....	5,288
Soap....	....	2,431
Wood, and manufactures of....	....	12,553
All other articles....	....	18,574
Total exports of merchandise (domestic)....	....	1,473,339
TO HONGKONG.		
Domestic exports:		
Breadstuffs—		
Wheat flour....barrels..	1,141,095	4,501,672
All other....	....	38,883
Chemicals, drugs, dyes, and medicines—		
Ginseng....pounds..	220,767	1,810,901
All other chemicals, etc....	....	37,139
Copper—Pigs, ingots, and bars....pounds..	2,806,926	392,109
Cotton and manufactures of—		
Upland and other (including linters)....do....	146,300	17,000
Cloths—		
Unbleached....yards..	640,120	103,125
Other....do....	178,780	20,620
Wearing apparel....	....	45,697
Yarn....	....	116,018
All other manufactures of cotton....	....	5,887
Fish—		
Dried, smoked, or cured....pounds..	6,806,719	187,020
All other....	....	42,875
Fruit....	....	42,175
Iron and steel, and manufactures of—		
Bars or rods of steel....pounds..	126,491	1,892
Machinery, machines, and parts of—		
Mining machinery....	....	290,072
All other machines and parts of....	....	219,977
Nails and spikes—		
Wire....pounds..	217,797	4,882
All other....do....	84,453	4,491
Tin plates, terneplates, and taggers tin....do....	3,372,045	106,250
All other manufactures of iron and steel....	....	145,500
Lead, and manufactures of—Pigs, bars, etc....pounds..	....	....
Meat and dairy products—		
Milk, condensed....do....	144,499	12,898
All other meat and dairy products....	....	13,911
Oils—Mineral, refined, or manufactured—		
Gas oil and fuel oil....gallons..	6,103	486
Illuminating....do....	20,093,317	1,321,809
Lubricating, and heavy paraffin....do....	591,396	106,421
Naphthas, etc.—Gasoline....do....	....	....
Residuum (including tar), etc....do....	1,680,000	26,000
Paper and manufactures of—		
Playing cards....	....	56,822
All other manufactures of paper....	....	12,867
Paraffin and paraffin wax....pounds..	2,073,275	73,859
Tobacco, and manufactures of—		
Unmanufactured—Leaf....do....	1,630,425	247,499
Manufactures of....	....	25,532
Wood, and manufactures of—Lumber—		
Boards, planks, and deals—Fir....1,000 feet..	9,714	117,618
All other lumber....	....	25,563
All other articles....	....	462,166
Total domestic exports....	....	10,637,636
Total foreign exports....	....	58,578
Total exports of merchandise....	....	10,696,214
Grand total....	....	37,042,298

The following table shows, by quantity and value, the imports to the United States from China during the fiscal years 1917 and 1918; Hongkong and the leased territories are shown separately:

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM CHINA.				
Animals: All other (including live poultry)	...	$5,342	...	$5,075
Antimony:				
Ore, contents..pounds	3,555,993	427,939	1,716,424	121,136
Matte, regulus, or metal..pounds	9,347,571	1,109,326	11,352,167	1,330,050
Articles specially imported:				
Articles temporarily imported for export within 6 months	...	88	...	...
For manufacture in bonded warehouse and export	...	12,919	...	60,214
Philosophical and scientific apparatus	...	71	...	...
Specimens of natural history	...	195	...	29
Works of art for exhibition, presentation to public institutions, etc	...	1,055	...	80
Articles, the growth, produce, and manufacture of the United States, returned	...	331,234	...	68,110
Art works	...	562,378	...	458,260
Beads and bead ornaments	...	8,790	...	19,023
Bone, hoofs, and horns, and manufactures of	...	2,062	...	1,534
Brass, fit only for remanufacture..pounds	...	...	67,200	9,533
Breadstuffs:				
Farinaceous substances, and preparations of (sago, tapioca, etc.)	...	61,872	...	79,990
Macaroni, vermicelli, and all similar preparations, pounds	78,571	6,651	78,814	9,773
Rice—				
Uncleaned (including paddy)..pounds	295,040	7,955	...	...
Cleaned..do	50,783,593	1,553,771	115,273,999	3,950,504
Rice flour, rice meal, and broken rice..do	10,425,256	202,244	16,865,955	464,614
All other	...	1,796	...	1,065
Bristles:				
Not sorted, bunched, or prepared..pounds	11,071	9,259	19,300	18,550
Sorted, bunched, or prepared..do	2,373,758	1,718,548	2,856,776	2,555,730
Bronze, manufactures of	...	6,423	...	2,465
Brushes, feather dusters, and hair pencils	...	11,305	...	16,138
Buttons, and parts of	...	1,751	...	3,209
Chemicals, drugs, dyes, and medicines:				
Cinchona bark, etc..pounds	...	...	191,185	47,856
Coal-tar distillates, preparations, or products—Colors or dyes	...	44,591	...	8,818
Gums—				
Camphor, crude, natural..pounds	185,772	57,777	316,926	166,884
Camphor, refined and synthetic..do	30,000	11,101	...	...
All other	...	3,514	...	52
Indigo..pounds	9,333	12,133	...	...
Licorice root..do	3,644,203	191,590	4,300,302	278,174
Preparations, medicinal	...	8,380	...	24,852
Soda, salts of	...	30,064	...	...
All other chemicals, drugs, dyes, etc	...	1,934,635	...	4,644,571
Copper, and manufactures of:				
Unrefined black, blister, and converter copper in bars, pigs, or other forms..pounds	448,000	75,143	...	...
Refined copper in bars, plates, rods, or other forms..pounds	336,000	84,000	...	...
All other	...	1,274	...	2,205
Cotton and manufactures of:				
Unmanufactured..pounds	16,760,960	2,180,510	21,899,516	5,304,448
Manufactures of—				
Cloths..square yards	435	41	10,315	4,474
Laces, embroideries, etc., and articles made thereof (except wearing apparel)—				
Embroideries, including edgings, insertings, and galloons	...	9,230	...	27,093
Laces and lace articles, including edgings, insertings, and galloons—				
Handmade	...	113,467	...	362,413
All other	...	36,658	...	256,315
All other	...	1,617	...	40,254
Plushes, velvets, etc..square yards	41	21	1,155	926
Waste or flocks..pounds	2,465,811	142,314	516,073	41,212

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM CHINA—continued.				
Cotton and manufactures of—Continued.				
Manufactures of—Continued.				
Wearing apparel—				
Knit goods		$1,478		$101
All other		10,930		29,092
All other manufactures of		8,632		7,399
Dice, draughts, chessmen, etc		1,630		1,299
Earthen, stone, and china ware:				
China, porcelain, etc.—Not decorated		639		944
China, porcelain, etc.—Decorated		65,255		85,566
Earthen and crockery ware—Decorated		5,233		4,454
All other		9,178		8,295
Edible substances, n. e. s.		11,798		19,284
Eggs of poultry ... dozen	464,568	83,135	479,617	108,122
Eggs, dried, frozen, etc ... pounds	9,094,008	1,615,379	14,024,349	3,967,516
Explosives		377,766		81,582
Fans:				
Common palm leaf ... dozen	258,369	40,661	117,714	23,876
All other		2,474		2,148
Feathers, etc., natural and artificial:				
Feathers and downs, crude, etc		408,754		761,917
Feathers, etc., dressed, colored, or manufactured, and not suitable for millinery ornaments		8,233		3,522
Feathers suitable for millinery ornaments, flowers, fruits, etc., artificial or ornamental, and manufactures of		2,621		2,783
Fibers, vegetable, and textile grasses, and manufactures of, n. e. s.:				
Unmanufactured—				
Hemp ... tons	4	823	264	79,662
Jute and jute butts ... do	653	51,949	400	33,622
Kapoc ... do	13	4,418		
Manila ... do	184	16,916		
Sisal grass ... do	786	157,552	64	13,442
All other ... do	1,134	224,497	2,535	626,488
Manufactures of—				
Fabrics, etc., of flax, hemp, ramie, etc., square yards	226	70	3,046	6,036
Handkerchiefs		482		2,257
Laces, embroideries, etc., and articles made thereof (except wearing apparel)		10,003		34,848
All other		7,186		2,083
Fish:				
Cured or preserved—				
Fish (except shellfish) packed in oil		9,216		19,012
All other		77,019		69,171
Fresh fish ... pounds	810	221	1,554	286
Shrimps, and other shellfish, and turtles		38,320		51,002
Fruits and nuts:				
Fruits—				
Olives ... gallons	8,023	3,302	9,562	5,342
Oranges				4,024
Preserved		23,343		18,781
All other		12,783		10,723
Nuts—				
Almonds, shelled ... pounds	11,569	2,388	19,241	4,687
Coconut meat, broken, or copra, not shredded, desiccated, or prepared ... pounds	227,838	9,760	140,410	17,451
Peanuts—				
Not shelled ... do	191,239	7,778	210,812	12,559
Shelled ... do	5,757,058	240,788	9,219,420	509,609
Walnuts—				
Not shelled ... do	6,472,081	403,169	777,961	60,668
Shelled ... do	1,139,942	147,390	1,306,147	293,824
All other		51,068		24,697
Furs, and manufactures of:				
Furs and fur skins, undressed		618,247		1,641,979
Furs, dressed, and manufactures of—				
Furs, dressed on the skin		945,092		674,925
Manufactures of—				
Hats, bonnets, and hoods ... dozen	15	405		
All other		99,515		104,701
Glass and glassware:				
Bottles, vials, demijohns, carboys, and jars, plain, green, or colored, ordinarily used as containers, empty or filled		7,211		11,479
Glass bottles, etc., cut or ornamented		1,365		9,329
All other		4,056		8,637

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM CHINA—continued.				
Gold and silver, manufactures of, including jewelry:				
Gold and silver, manufactures of		$2,426		$5,099
Jewelry		9,637		17,715
Grease and oils, n. e. s.…pounds	2,650,264	222,962	16,850,367	1,891,768
Hair, and manufactures of:				
Unmanufactured—				
Horse…do.	994,966	509,460	513,582	260,231
Other animal…do.	656,238	95,797	181,073	72,447
Human, uncleaned…do.	319,078	84,535	1,004,607	356,427
Manufactures of—				
Human, cleaned, and manufactured		486,987		580,777
All other		135		1,827
Hats, bonnets, and hoods, and materials for:				
Materials for		1,743,336		3,176,996
Hats, bonnets, and hoods, composed of straw, chip, grass, palm leaf, etc		364,344		74,806
Hides and skins (except fur skins), raw or uncured:				
Buffalo hides—Dry…pounds	3,472,296	709,212	1,542,981	332,583
Calfskins—				
Dry…do.	1,724,258	582,065	547,513	193,652
Green or pickled…do.	4,090	1,116	988	310
Cattle hides—				
Dry (12 pounds and over)…do.	22,483,503	8,006,607	9,324,484	3,457,907
Green or pickled (25 pounds or over)…do.	2,600,820	598,647	3,129,955	661,544
Goatskins—Dry…do.	21,340,353	15,105,231	12,105,273	7,469,817
Horse, colt, and ass skins—Dry…do.	1,132,708	235,320	379,561	92,973
Sheep skins—				
Dry…do.	4,835,211	1,521,257	1,983,559	639,376
Green or pickled…do.	26,438	9,132		
All other skins…do.	1,426,565	655,909	1,499,812	567,662
Household and personal effects, and wearing apparel in use, etc.		33,590		24,514
India rubber, etc.:				
India rubber, crude…pounds	2,841	1,863	11,763	5,605
India rubber, scrap, etc…do.			46,661	2,606
Iron and steel, and manufactures of:				
Pig iron…tons	5,014	68,458	2,601	28,344
Machine tools				9,274
All other manufactures of		13,833		21,458
Ivory, and manufactures of:				
Animals' tusks, etc…pounds			6,257	9,982
Manufactures of		3,106		1,786
Leather and tanned skins, and manufactures of:				
Leather and tanned skins—				
Goatskins (tanned skins for morocco)		132		4,113
Upper leather—Goat and kid				32,545
All other		13,020		77
Manufactures of—				
Boots and shoes…pairs	35,778	21,798	25,595	20,842
All other		2,912		1,983
Matting and mats, for floors, of coco fiber, rattan, straw, etc.…square yards	3,946,408	339,903	1,073,593	117,996
Meat products:				
Bacon and hams…pounds			7,599	1,990
Beef and veal…do.			307,231	29,203
Pork…do.			29,716	2,790
Meats, prepared or preserved		1,889		29,542
Sausage casings		407,854		596,662
All other		46,532		601,412
Metals, metal compositions, and manufactures of, n. e. s.		13,248		11,191
Minerals, crude, n. e. s.				91,575
Moss, seaweed, etc.:				
Crude and manufactured		5,625		6,902
All other, manufactured or dyed		760		
Musical instruments and parts, etc.		1,773		5,122
Oil cake…pounds	51,700	681	564	32
Oils: Vegetable—				
Expressed—				
Chinese nut…gallons	6,764,400	3,979,034	4,491,690	3,764,601
Coconut…pounds	387,589	37,166	1,176,072	130,969
Cottonseed…do.	9,156,433	676,440	9,063,215	1,024,764
Peanut…gallons	591,274	411,807	3,324,105	2,815,400
Rapeseed…do.	23,604	11,061	166,388	133,959
Soya bean…pounds	12,911,549	944,938	12,470,720	1,456,172
All other		41,313		152,900
Distilled and essential		13,646		22,608

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM CHINA—continued.				
Paints, pigments, colors, etc.		$72		$13,449
Paper, and manufactures of:				
Books, music, maps, engravings, etchings, photographs, and other printed matter		38,427		29,948
All other		44,657		24,318
Paraffin (not including oil) ... pounds	740,728	86,691	448,146	53,771
Pipes and all other smokers' articles		1,416		1,336
Plants, trees, shrubs, and vines:				
Bulbs, bulbous roots or corms, cultivated for their flowers or foliage ... thousands	1,205	20,963	870	20,616
All other		109		181
Platinum, unmanufactured ... ounces troy			489	38,207
Precious and semiprecious stones, and imitations of:				
Pearls, and parts of, not strung or set		12,563		4,532
Other precious stones, uncut		295		
Other precious and semiprecious stones, cut, but not set		2,932		20,790
Imitation precious stones		9,319		3,107
Seeds:				
Flaxseed or linseed ... bushels	118,778	170,451	71,429	118,541
All other		119,361		119,857
Silk, and manufactures of:				
Unmanufactured—				
Cocoons ... pounds	10,777	8,546	30,990	24,260
Raw, in skeins reeled from the cocoon or rereeled ... pounds	7,006,700	27,842,932	6.180,480	29,216,586
Waste ... do	3,593,198	2,130,541	3,569,978	2,568,026
Manufactures of—				
Bandings, beltings, bindings, etc., not over 12 inches in width		30,912		36,096
Fabrics woven in the piece		1,520,555		1,299,621
Laces and embroideries		63,102		80,032
Wearing apparel		67,256		70,660
All other		83,520		103,195
Spices: Unground—				
Cassia, and cassia vera ... pounds	1,896,394	124,680	1,746,593	92,354
Ginger root, not preserved ... do	189,419	6,956	197,500	10,018
Pepper, black or white ... do	630,922	90,112	21,756	3,285
All other ... do	295,798	31,218	177,611	26,344
Spirits, wines, malt liquors, and other beverages:				
Spirits, distilled ... proof gallons	120,860	181,413	16,501	24,959
All other		409		27
Starch ... pounds	438,610	18,033	282,100	14,315
Stone:				
Lithographic, not engraved				32,994
All other		4,668		2,268
Straw and grass, manufactures of		16,018		6,010
Sugar—				
Cane ... pounds	683,133	32,747	498,259	27.944
Candy and confectionery ... do	36,134	2,775	26.778	2.141
Tea ... do	19,810,428	3,109,912	21,082,866	4,361,557
Tea waste, siftings, or sweepings, for manufacturing purposes ... pounds	1,119,337	112,890	109,327	15,164
Tin in bars, blocks, pigs, or grain or granulated ... do	4,335,915	1,974,578	3,699,235	2,231,487
Tin ore ... tons	10	6,788		
Tobacco, and manufactures of:				
Leaf ... pounds	2,947,026	395.518	4,177,234	996,894
Manufactures of		37,089		38,662
Toys		4,958		8,932
Tungsten-bearing ore ... tons	50	42,747	759	723,935
Vegetables:				
Beans and lentils ... bushels	28,699	64,337	13,301	36,052
Onions ... do	18	15	14,284	27,918
Peas, dried ... do	27,172	40,579	86,632	184,567
Prepared or preserved—				
Mushrooms and truffles ... pounds	31,129	17,099	17,574	12,101
Pickles and sauces		55,003		37,012
All other		94,596		84,539
All other in their natural state		32,166		28,013
Vinegar ... proof gallons	5,812	1,700	2,945	1,183
Waste, n. e. s		1,326		9,570
Wax:				
Beeswax ... pounds			1,200	378
Vegetable ... do	366,237	35,744	478,249	44,415

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM CHINA—continued.				
Wood, and manufactures of:				
Unmanufactured—				
Rattans and reeds		$52,982		$30,665
All other		20,065		52,128
Manufactures of—				
Baskets of bamboo, wood, straw, etc		33,833		38,498
Chair cane or reed		95,705		103,739
Furniture		25,235		4,143
All other		72,263		66,412
Wool, hair of the camel, goat, alpaca, and other like animals, and manufactures of:				
Unmanufactured—				
Wool of the sheep, hair of the camel, and other like animals—				
Class 1—Clothing ... pounds	14,781,995	4,214,563	13,226,755	4,160,053
Class 2—Combing ... do	680,597	243,260	999,658	453,517
Class 3—Carpet ... do	25,448,769	6,487,390	24,432,434	7,205,509
Hair of the angora goat, alpaca, and other like animals—				
Unmanufactured ... pounds	454,608	146,895	41,825	13,270
Manufactured				3,960
Manufactures of—				
Carpets and carpeting—				
Carpets and rugs, woven whole ... square yards	130,581	818,681	113,648	598,717
All other ... do	1,200	2,538	1,380	7,563
All other		6,615		5,546
Zinc: Ore and calamine contents ... pounds	58,228	666		
All other articles		96,792		105,817
Total		105,905,531		116,644,981
FROM CHINA: BRITISH LEASED TERRITORY.				
Cotton waste, or flocks ... pounds	161,702	5,922		
Tea ... do	57,260	4,726		
Total		10,648		
FROM CHINA: FRENCH LEASED TERRITORY.				
Fibers, etc., unmanufactured ... tons			12	1,354
India rubber, crude ... pounds			15,680	6,041
Feathers, etc., natural and artificial				3,580
Hats, etc., materials for				1,442
Total				12,417
FROM CHINA: KIAOCHOW LEASED TERRITORY.				
Bristles, sorted ... pounds			7,260	4,414
Hair, and manufactures of:				
Human, cleaned and manufactured		1,132		
All other				1,292
Hat materials		22,152		17,110
Oil:				
Vegetable—Expressed—				
Peanut ... gallons	98,500	82.046	30.000	26,870
Soya bean ... pounds			74,000	10,811
All other expressed				3,032
All other articles				736
Total		105.330		64,265
FROM CHINA: JAPANESE LEASED TERRITORY.				
Breadstuffs: Rice flour, meal, or broken rice ... pounds			978,054	24,451
Bristles, sorted, bunched, etc ... do			1,300	1,625
Coal, bituminous ... tons	200	800		
Furs and fur skins:				
Undressed				384,478
Dressed on the skin				2,225
Fruits and nuts: Nuts—				
Peanuts—Shelled ... pounds	100.000	3.336	290.000	14,592
Walnuts—Not shelled ... do	100,000	6,480		
Hides and skins:				
Goatskins—Dry ... do	136.800	72.675		
Sheepskins—Dry ... do			60,370	21,497

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM CHINA; JAPANESE LEASED TERRITORY—con.				
Household and personal effects, etc		$300		
Metals		642		
Oil cake ... pounds	1,760,000	16,892		
Oil:				
Chinese nut ... gallons			156,967	$131,136
Peanut ... do			154,604	155,397
Soya bean ... pounds	82,320,382	5,824,067	237,442,917	23,104,484
Expressed oils—All other				46,599
Seeds:				
Castor beans or seeds ... bushels	37,887	60,933	13,436	24,434
All other		14,400		129,296
Shells, and mother-of-pearl				14,643
Vegetables: In natural state		10		
All other articles				823
Total		6,000,596		24,055,680
FROM HONGKONG.				
Agricultural implements, and parts of		1,430		2,250
Antimony: Matte, regulus, etc ... pounds	534,956	61,935	940,880	104,341
Articles the growth, produce, and manufacture of the United States, returned		9,789		6,067
Art works		7,647		51,348
Beads and bead ornaments		7,662		18,197
Bone and horn, manufactures of, including combs		2,081		1,529
Bones, hoofs, and horns, unmanufactured		3,366		4,626
Breadstuffs:				
Farinaceous substances (sago, tapioca, etc.)		13,630		44,359
Macaroni, vermicelli, and all similar preparations ... pounds	115,881	10,742	100,144	13,333
Rice—				
Uncleaned (including paddy) ... do	92,893	2,778	302,800	9,337
Cleaned ... do	27,917,917	748,104	92,440,497	3,332,618
Rice flour, rice meal, and broken rice ... do	21,290,835	401,486	23,394,767	733,338
All other		1,007		1,262
Bristles, not sorted, etc ... pounds			2,000	5,728
Bristles, sorted, bunched, etc ... do	108,957	71,500	162,053	236,576
Brushes, feather dusters, etc		4,878		8,683
Chemicals, drugs, dyes, and medicines:				
Potash, carbonate of ... pounds	38,257	3,967	11,409	1,486
Preparations, medicinal		3,723		8,292
All other		127,148		140,323
Copper, manufactures of, n. e. s		1,696		1,461
Cotton, manufactures of:				
Wearing apparel		6,368		14,049
All other		9,586		22,102
Dice, draughts, etc		1,382		2,460
Earthen, stone, and china ware:				
China—Decorated or ornamented		60,697		80,917
Earthen and crockery ware—Decorated		4,804		6,077
All other		3,086		1,006
Edible substances, n. s. p. f		58,314		85,058
Eggs of poultry ... dozen	159,116	30,734	121,223	29,687
Eggs, dried, frozen, etc., and yolks of ... pounds	2,608	119	942	115
Explosives		37,139		49,515
Fans:				
Common palm leaf ... dozen	96,027	14,638	381	69
All other		4,990		5,730
Feathers, crude		22,869		125,866
Fertilizer		212		
Fibers, vegetable and textile grasses, and manufactures of:				
Unmanufactured ... tons	134	31,572	1,054	276,069
Manufactures of—				
Laces, embroideries, etc		21,406		23,679
Wearing apparel		3,246		10,683
All other		1,971		4,514
Fish:				
Cured or preserved—				
Fish (except shellfish), packed in oil		17,442		23,243
All other		43,950		81,548
Shellfish—Shrimps and other shellfish and turtles		84,933		97,336
All other		32,388		661

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM HONGKONG—continued.				
Fruits and nuts:				
Fruits—				
Dates ... pounds	41,202	$2,866	36,930	$4,091
Olives ... gallons	10,833	5,412	8,834	5,635
Fruits, preserved		74,489		90,516
All other		10,215		9,299
Nuts—				
Almonds—Shelled ... pounds	10,286	2,041	13,023	3,232
Coconuts, in the shells		14,292		
Coconut meat, broken, or copra—				
Not shredded or prepared ... pounds	47,291	3,052		
Shredded, desiccated, or prepared ... do	149,394	10,027	261,080	32,593
Peanuts—				
Not shelled ... do	195,946	8,301	113,042	4,749
Shelled ... do	6,201,755	273,464	7,910,520	500,768
Walnuts—Not shelled ... do	120,000	10,200	25,066	2,159
All other		49,253		43,588
Furs and fur skins undressed		104		4,280
Glass and glassware:				
Bottles, vials, etc., empty or filled		10,021		3,290
Bottles, decanters, and other glassware, cut or ornamented		4,330		10,321
All other		2,185		4,334
Gold and silver, manufactures of, including jewelry:				
Gold and silver, manufactures of		3,076		9,144
Jewelry		10,912		13,689
Hair, and manufactures of:				
Unmanufactured—				
Horse ... pounds	7,901	4,488	1,788	3,010
Human, uncleaned ... do	265,360	119,124	576,332	214,231
Manufactures of—				
Human, cleaned and manufactured		1,504		1,642
All other				1,389
Hats, bonnets, and hoods, and materials for		209		11,452
Hides and skins (except fur skins), raw or uncured:				
Buffalo hides—Dry ... pounds	45,963	15,553	472,244	166,509
Calfskins—Dry ... do	156,055	41,519	374,766	141,800
Calfskins, green or pickled ... do			16,224	3,210
Goatskins—Dry ... do	1,000	1,339	5,048	3,764
Sheepskins—Dry ... do	1,000	1,250	24,357	23,907
Cattle hides—Dry (12 pounds and over) ... do	240,985	65,262	288,721	89,818
All other ... do	1,183	883	147,815	75,684
Household and personal effects, etc		16,590		3,152
India rubber, etc., unmanufactured:				
India rubber ... pounds	197,845	163,182	324,702	208,252
India rubber, scrap ... do	33,000	1,233		
Iron and steel, manufactures of:				
Cutlery		2,389		2,928
Tinplate scrap ... pounds	414,800	2,656		
All other		3,820		6,324
Ivory, manufactures of		2,025		1,882
Leather, manufactures of		7,759		3,332
Matting, etc., for floors, of coco fiber, rattan, straw, etc ... square yards	283,851	27,226	100,427	11,566
Meat and dairy products:				
Meats, prepared or preserved		4,289		43,406
Sausage casings		1,774		5,685
Other meat products		67,808		68,832
Dairy products, butter, etc ... pounds	511	164	12,[illegible]80	1,518
Metals		4,004		4,908
Moss, seaweeds, and vegetable substances, n. e. s		5,056		7,168
Musical instruments		9,651		5,021
Oils: Vegetable—				
Expressed—				
Chinese nut ... gallons	28,386	23,631	110,602	102,860
Peanut ... do	220,586	146,364	91,354	111,013
All other		3,627		7,064
Distilled and essential		268,093		137,483
Paper, and manufactures of:				
Books, engravings, and other printed matter		3,940		5,453
All other		21,877		27,761
Perfumery, cosmetics, etc		1,387		1,105
Plants, trees, shrubs, etc.:				
Bulbs, bulbous roots, etc ... thousands	241	11,968	173	11,567
All other		55		22

Imports to United States.	Year ended June 30—			
	1917		1918	
	Quantity.	Value.	Quantity.	Value.
FROM HONGKONG—continued.				
Precious and semiprecious stones:				
Pearls and parts of, not strung		$8,768		$110
Other precious stones, cut but not set		11,921		208
Imitation precious stones		5,808		842
Seeds:				
Castor beans or seeds ... bushels			4,295	13,479
Grass ... pounds	35,100	3,686		
All other		6,909		43,195
Shells, unmanufactured				17,023
Silk, and manufactures of:				
Unmanufactured—Waste ... pounds	59,000	38,635	278,654	223,353
Silk, raw, in skeins, etc ... do	1	2	1,499	12,219
Manufactures of—				
Fabrics woven in the piece		14,320		13,597
Laces, embroideries, etc		25,190		46,772
Wearing apparel		61,289		67,868
All other		23,421		40,274
Spices: Unground—				
Cassia and cassia vera ... pounds	3,622,478	277,917	2,938,742	226,836
Ginger root, not preserved ... do	133,489	5,441	200,983	15,786
Pepper, black or white ... do	416,506	64,501	1,411,065	217,103
All other ... do	86,856	10,243	187,450	18,022
Spirits, distilled:				
Cordials ... proof gallons	3,961	4,265	2,523	3,844
All other ... do	72,620	88,869	23,773	39,146
Straw and grass, manufactures of		31,367		18,024
Sugar:				
Cane ... pounds	336,736	16,564	124,522	7,841
Sugar candy and confectionery ... do	47,642	3,327	48,637	3,858
Tea ... do	740,396	159,460	497,240	151,592
Tin in blocks, bars, etc ... do	5,071,319	2,070,908	13,523,832	7,769,260
Tobacco, and manufactures of:				
Leaf ... do	506,882	87,141	762,677	197,692
Manufactures		31,816		44,170
Tungsten-bearing ore ... tons		150	242	214,266
Vegetables:				
Beans and lentils ... bushels	12,192	21,634	17,609	44,639
Prepared or preserved—				
Mushrooms and truffles ... pounds	35,924	21,035	35,448	27,060
Pickles and sauces		77,199		83,913
All other		191,699		159,303
All other in their natural state		61,675		76,040
Wood, and manufactures of:				
Unmanufactured—				
Logs and round timber ... thousand feet	51	5,661		
Rattans and reeds		19,014		25,066
All other		43,055		69,643
Manufactures of—				
Baskets of bamboo, wood, etc		31,599		26,860
Chair cane or reed		113,332		79,762
Furniture		74,404		16,761
All other		41,957		33,525
Wool, hair of the camel, etc., manufactures of:				
Carpets and rugs woven whole ... square yards	408	2,506	1,257	2,855
All other		247		60
Zinc ore and calamine ... zinc contents ... pounds	4,480,860	154,000		
All other articles		76,057		52,363
Total		7,512,396		18,086,274
Grand total		119,534,500		158,863,617

The following table shows the imports to the United States from China during the fiscal year 1914:

Imports to United States.	Year ended June 30, 1914.	
	Quantity.	Value.
FROM CHINA.		
Antimony—Ore, matte, regulus, or metal (antimony contents), pounds.	3,728,859	$165,952
Articles, the growth, produce, and manufacture of the United States, returned		28,400
Art works		63,938
Breadstuffs:		
Rice, cleaned...pounds..	30,417,603	864,736
Rice flour, rice meal, and broken rice...pounds..	6,625,665	118,856
All other		65,534
Bristles, sorted, bunched, or prepared....pounds..	1,410,373	934,211
Chemicals, drugs, dyes, and medicines		640,354
Cotton, and manufactures of:		
Unmanufactured, pounds	9,109,686	1,035,618
Manufactures of		45,892
Earthen, stone, and china ware:		
China, porcelain, etc.—Decorated		43,044
All other		1,319
Eggs...dozen..	1,895,618	234,438
Eggs, yolks of, and frozen, pounds	347,865	26,965
Explosives—Firecrackers, gunpowder, etc		202,819
Fans, common palm-leaf, dozen	582,884	53,982
Feathers, etc., natural and artificial		60,614
Fibers, vegetable, etc.; and manufactures of:		
Hemp...tons..		
Jute, and jute butts, tons	844	70,315
All other unmanufactured...tons..	74	11,669
Manufactures of		11,190
Fish		71,225
Fruits and nuts:		
Fruits		28,963
Nuts—		
Peanuts—		
Not shelled, pounds.	2,132,338	66,401
Shelled...do....	3,589,879	132,801
Walnuts—		
Not shelled....do....	4,011,543	185,693
Shelled...do....	233,892	17,743
All other		12,102
Furs and fur skins:		
Undressed		58,915
Dressed on the skin		487,001
Manufactures of		227,633
Grease and oils, n. e. s., pounds	3,363,937	190,834
Hair, and manufactures of:		
Horse hair.....pounds..	143,368	119,763
Other animal......do....	10,000	1,248
Human, uncleaned, pounds	167,290	60,370
Human, cleaned, and manufactured		824
All other manufactures of		
Hats, bonnets, and hoods, and materials for:		
Materials for		169,604
Hats, etc., of straw, chip, grass, osier, etc		12,303
FROM CHINA—continued.		
Hides and skins (except fur skins), raw or uncured:		
Buffalo...pounds..	87,463	$12,258
Calf and kip...do....	277,059	73,686
Cattle—		
Dry...do....	6,563,503	1,758,970
Green or pickled.do....	1,290,538	192,189
Goat...do....	7,304,761	2,126,706
Horse, colt, and ass, pounds	71,223	12,910
Sheep...pounds..	477,953	89,678
All other...do....	314,430	51,185
Household and personal effects		40,865
Iron and steel, and manufactures of:		
Pig iron...tons..	3,217	57,738
All other		2,041
Matting and mats for floors of cocoa fiber, rattan, or straw, etc. square yards..	9,046,532	618,766
Meat products:		
Meats, prepared or preserved		18,189
Sausage casings		22,287
All other		33,395
Oils:		
Vegetable—		
Coconut......pounds..	412,633	29,606
Cottonseed......do....	9,682,248	512,382
Nut oil, or oil of nuts, n. e. s.—		
Chinese nut, gallons.	4,899,984	1,943,400
Peanut...do....	100,816	66,445
Soya bean....pounds..	5,983	363
All other		24,661
Seeds		17,856
Silk, and manufactures of:		
Cocoons...pounds..		
Raw, in skeins, etc., pounds	5,926,745	15,918,730
Waste...pounds...	1,533,879	805,888
Fabrics woven in the piece		120,189
Laces and embroideries		75,138
Wearing apparel		39,844
All other manufactures of		24,908
Spices:		
Cassia and cassia vera, pounds	4,559,398	169,327
All other...pounds..	470,655	36,418
Spirits, wines, malt liquors, and other beverages:		
Spirits, distilled, proof gallons	111,166	113,368
All other		
Sugar—Cane.....pounds..	821,337	23,584
Tea...do....	20,139,342	2,755,512
Vegetables:		
Prepared or preserved		86,967
All other		54,606
Wood, and manufactures of:		
Rattans and reeds		35,558
All other unmanufactured		22,477
Manufactures of		89,523
Wool, etc., and manufactures of:		
Class 1—Clothing wool, pounds	108,800	15,902
Class 3—Carpet wool, pounds	29,894,054	4,428,367

Imports to United States.	Year ended June 30, 1914.	
	Quantity.	Value.
FROM CHINA—continued.		
Wool, etc., and manufactures of—Continued.		
Hair of the Angora goat, alpaca, etc...pounds..	6,739	$3,172
Carpets and carpeting, square yards...........	15,138	75,157
All other manufactures of	....	3,309
All other articles..........	....	256,099
Total..............	....	39,382,978
FROM CHINA: KIAOCHOW LEASED TERRITORY.		
Bristles, sorted, bunched, or prepared.....pounds..	120,860	84,410
Chemicals, drugs, dyes, and medicines............	....	992
Fruits and nuts:		
Nuts—		
Peanuts, shelled, pounds..	949,225	31,524
All other..............	....	515
Hats, bonnets, and hoods, and materials for........	....	438,489
Hides and skins (except fur skins), raw or uncured:		
Calf, dry........pounds.	7,608	2,028
Cattle.............do....	208,187	36,411
Household and personal effects............	....	1,960
Oils—Vegetable, expressed—Soya bean ....pounds..	118,909	3,909
All other..............	....	....
Silk, manufactures of—Fabrics, woven in the piece............	....	17,062
All other articles..........	....	21,173
Total..............	....	638,473
FROM CHINA: JAPANESE LEASED TERRITORY.		
Articles the growth, produce, or manufacture of the United States, returned............	....	1,020
Bristles, sorted, bunched, or prepared.....pounds..	....	....
Oils—Vegetable, expressed—Soya bean..pounds..	6,150,000	288,320
Seeds..............	....	549
All other articles..........	....	....
Total..............	....	289,889
FROM HONGKONG.		
Antimony—Matte, regulus, or metal....pounds..	571,933	24,685
Breadstuffs:		
Rice—		
Uncleaned (including paddy).....pounds..	576,525	17,415
Cleaned.........do....	4,189,440	130,573
Rice flour, rice meal, and broken rice, pounds..............	3,226,591	62,864
All other..............	....	20,947
Bristles, sorted, bunched, or prepared.....pounds..	61,719	25,495
Chemicals, drugs, dyes, and medicines............	....	68,852
Earthen, stone, and china ware:		
China, porcelain, parian, etc.—Decorated........	....	35,715
All other..............	....	1,814
FROM HONGKONG—con.		
Edible substances..........	....	$36,783
Explosives..............	....	22,871
Feathers, etc., natural and artificial:		
Feathers and downs, crude..............	....	77,846
All other..............	....	1,048
Fish:		
Cured or preserved—		
Fish (except shellfish), packed in oil........	....	13,755
All other..............	....	51,387
Shrimps, and other shellfish and turtles........	....	48,756
Fruits and nuts:		
Fruits—		
Fruits, preserved......	....	27,833
All other..............	....	12,496
Nuts—		
Peanuts—		
Not shelled.pounds..	1,622,148	49,477
Shelled........do....	2,795,091	110,680
All other..............	....	35,022
Hair, human, uncleaned, pounds..............	104,972	51,557
Hats, bonnets, and hoods, and materials for........	....	24,291
Mattings and mats, for floors, etc.square yards..	353,741	21,096
Meat products:		
Meats, prepared or preserved..............	....	42,232
All other meat products.	....	45,238
Oils—Vegetable:		
Expressed—		
Peanut.......gallons..	63,125	57,025
All other..............	....	11,211
Distilled and essential...	....	79,781
Silk, and manufactures of:		
Raw, in skeins, etc., pounds..............	7,211	25,048
Waste..........pounds..	13,333	15,000
Wearing apparel........	....	28,222
All other manufactures of	....	24,702
Spices—Unground:		
Cassia and cassia vera, pounds..............	796,408	90,641
All other.......pounds..	354,052	25,471
Spirits, distilled, proof gallons..............	91,884	86,652
Straw and grass, manufactures of..............	....	41,768
Tea..............pounds..	567,535	96,899
Tin, in bars, blocks, pigs, or grain, etc....pounds..	2,270,220	855,803
Tobacco and manufactures of..............	....	29,798
Vegetables:		
Prepared or preserved—		
Pickles and sauces.....	....	41,980
All other..............	....	85,196
All other, in their natural state..............	....	59,007
Wood and manufactures of:		
Rattans and reeds.......	....	6,381
All other unmanufactured..............	....	15,371
Furniture..............	....	89,055
All other manufactures of..............	....	38,148
Zinc—Ore and calamine (zinc contents)..pounds.	....	....
All other articles..........	....	221,973
Total..............	....	3,085,840
Grand total..........	....	43,397,180

As will be seen from the foregoing figures, exports from the United States to China increased from $37,042,298 in the fiscal year 1914 to $55,889,380 in 1917, $69,773,086 in 1918, and $117,217,179 in 1919. American purchases of Chinese goods show a very much larger increase—from $43,397,180 in 1914 to $119,534,500 in 1917 and to $158,863,617 in 1918. In the fiscal year 1919, however, American imports from China registered a slight decrease—to $154,385,806.

STATISTICS OF SHIPPING.

The following table shows the number and tons of the vessels of each nationality entered and cleared at the Chinese Maritime Customs during the years 1914 to 1918:

Flag.	1914		1915		1916	
	Number.	Tons.	Number.	Tons.	Number.	Tons.
American	3,133	1,047,422	3,148	804,414	3,082	799,913
Austrian	51	174,233	...	...	...	...
British	32,951	39,266,765	33,339	37,675,657	34,132	35,840,573
Danish	100	139,526	82	115,628	115	206,734
Dutch	276	398,271	287	496,664	233	463,995
French	520	898,644	537	561,955	409	596,237
German	3,906	4,026,493	979	58,263	1,151	66,532
Italian	...	...	...	...	57	979
Japanese	22,407	23,996,972	20,141	23,873,016	21,598	24,233,835
Norwegian	692	771,235	726	774,873	472	636,217
Portuguese	1,748	311,696	784	152,021	440	129,478
Russian	4,035	1,954,925	4,873	1,922,055	3,790	1,545,085
Swedish	15	40,985	26	69,450	34	101,948
Nontreaty powers	...	...	...	...	2	1,466
Chinese shipping[a]	42,617	18,628,456	43,282	18,655,411	45,552	18,460,533
Chinese junks[b]	108,140	6,328,590	98,683	5,503,598	90,949	4,936,576
Total	220,591	97,984,213	206,887	90,663,005	202,016	88,020,101

Flag.	1917		1918	
	Number.	Tons.	Number.	Tons.
American	3,609	1,125,155	3,119	1,214,921
Austrian	...	...	...	...
British	34,902	33,576,217	31,034	29,911,369
Danish	83	142,238	86	86,847
Dutch	374	712,439	416	575,757
French	328	584,891	365	230,223
German	233	17,054	...	...
Italian	478	14,912	464	28,796
Japanese	22,454	24,581,647	24,961	25,283,373
Norwegian	370	474,349	191	257,609
Portuguese	456	199,438	172	60,350
Russian	3,276	1,429,200	1,949	795,529
Swedish	10	26,692	8	20,168
Nontreaty powers	...	...	...	...
Chinese shipping[a]	46,422	18,517,957	43,638	16,984,523
Chinese junks[b]	100,478	5,504,860	87,164	4,798,181
Total	213,473	86,907,049	193,567	80,247,706

[a] Vessels of foreign type owned by Chinese and sailing under the Chinese flag.

[b] Vessels of Chinese type built and owned by Chinese, entered and cleared at the Maritime Customs.

CANTON CONSULAR DISTRICT.

By Consul Paul R. Josselyn.[1]

LOCATION AND AREA.

The Canton consular district comprises the four southeastern Provinces of China and is situated, roughly speaking, between parallels 22° and 28° north latitude. From the standpoint of latitude it thus corresponds to the north-central portion of Mexico, the north-central part of the Desert of Sahara, and north-central India and northern Burma. The district is bounded on the north by the Provinces of Szechwan, Hunan, Kiangsi, and Fukien; on the west, by British Burma; and on the south by Tongking, the Gulf of Tongking, and the South China Sea. The four Provinces comprising the district are Kwangtung (except the northeastern part east of longitude 115°, which is within the Swatow consular district) and the whole of the Provinces of Kwangsi, Yunnan, and Kweichow. The area of the district is 391,120 square miles, as follows: Kwangtung Province, 100,000 square miles; Kwangsi Province, 77,220 square miles; Yunnan Province, 146,718 square miles; Kweichow Province, 67,182 square miles. It is, therefore, about six times as large as the New England States, or about equal to the combined areas of Texas and New Mexico.

POPULATION.

It is virtually impossible to calculate accurately at the present time the population of the various Provinces in China. No census along the lines followed in the United States and Europe has ever been taken, but, on the basis of statistics that have been collected and that may be considered fairly trustworthy, the population of Kwangtung[2] is given as 32,000,000; Kwangsi, 5,142,000; Kweichow, 7,650,000; and Yunnan, 12,721,000.

Kwangtung is much the most populous Province in the district, having a population per square mile of 318 people, or about the same density as the State of New Jersey. By far the larger part of the people live in what is known as the Canton Delta, a very rich and well-watered district, intersected by innumerable streams, which provide excellent means of communication.

The 3 other Provinces of this district are among the most sparsely populated of any of the 18 Provinces of China. Kweichow has a population of 114 per square mile and Yunnan 86 per square mile, while Kwangsi has only 66 per square mile. The average density of population throughout the district is 146 per square mile, or about five times the average density of population for the United States.

The native population is composed of a great many different elements. The principal element is what is known as the Cantonese.

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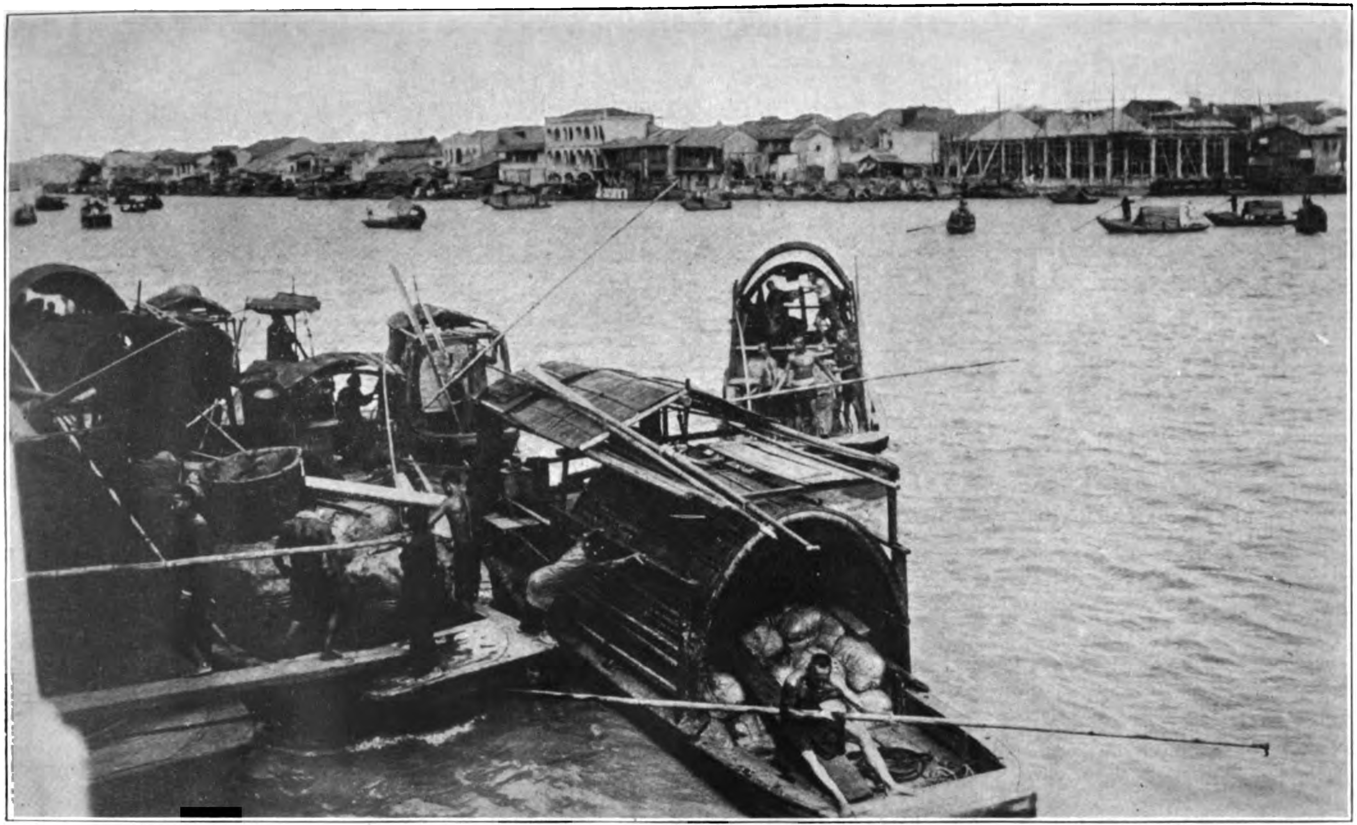
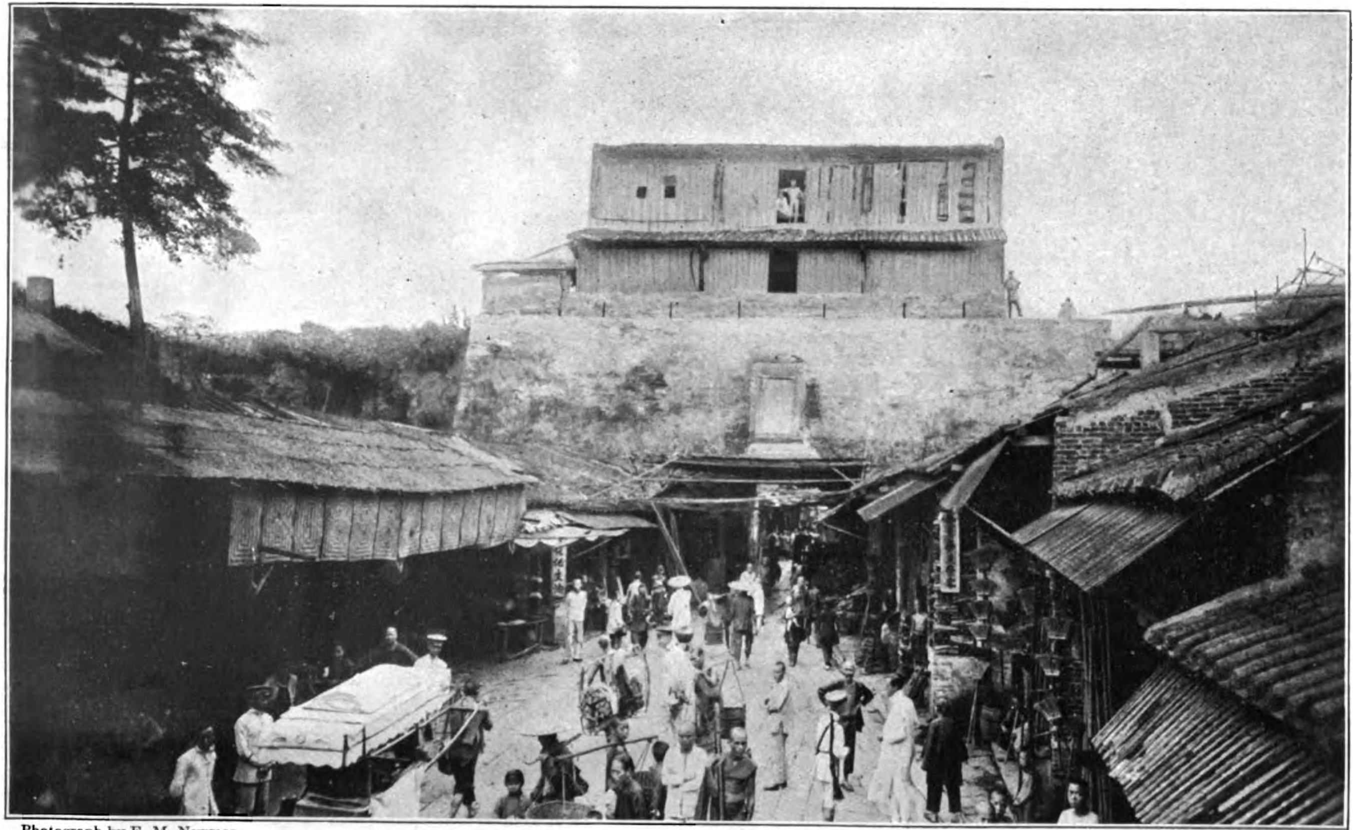
[1] Consul Josselyn, who is now stationed at Chungking, was vice consul (in charge) at Canton at the time of the preparation of this report.

[2] See also the table on p. 17 and the second footnote on p. 18.



Photograph by E. M. Newman.

FIG. 2.—SCENE ON PEARL RIVER, CANTON.



Photograph by E. M. Newman.

FIG. 3.—WATER GATE, NTON.

The Cantonese form considerably more than half of the population of Kwangtung Province and live particularly in the Canton Delta. They have also penetrated into Kwangsi, Kweichow, and Yunnan, where they are the most active and shrewd merchants. The "Hakkas" very probably came originally from Fukien Province and the north. At present they are to be found chiefly in the northeastern portion of the Province of Kwangtung, although they have penetrated throughout the whole of Kwangtung, where they have intermingled with the Cantonese. They are not as shrewd merchants as the Cantonese, but are of stronger physique. In the vicinity of Canton are also to be found the "Tung-kas," or "cave-dwellers." These form for the most part what is known as the boat population of Canton and vicinity. They live altogether on their boats and are looked down upon by the Cantonese. There are also to be found several aboriginal tribes scattered throughout the district, whose manners, customs, and character are in no wise connected with those of the Chinese. Some of the principal tribes are known as the "Lolos," the "Miaotzes," and the "Sais" or "Sis." The latter are principally in the island of Hainan.

PHYSICAL FEATURES.

By far the greater part of the region comprising this district is mountainous in character. The highest mountains are on the west, in the Provinces of Yunnan and Kweichow. These are an extension of the Tibetan and Himalayan Ranges. In western Yunnan these mountain ridges are high but narrow and are separated by deep gorges, at the bottom of which are mountain torrents. Many passes in these mountains attain an altitude of 11,000 feet. The Yangtze River for a long way forms the northern boundary of Yunnan, separating that Province from Szechwan. The northern part of Yunnan Province is low, damp, and unhealthful and is interspersed with peaks and gorges. It is very sparsely inhabited. The Yangtze River in this part of its course is called the "Kinsha-kiang," or "Golden-Sand River," and is merely a torrent hemmed in between high mountains, which at times exceed 16,000 feet in elevation. In all this district it and its branches are unsuitable for navigation. The eastern part of Yunnan is a vast table-land, varying in elevation from 6,500 to 9,800 feet and sloping gradually toward the east. In this region are also numerous rocky peaks; many of these are covered with fir trees, but others are denuded and barren. Here also are many marshes, lakes, and rivers. The temperature is mild and pleasant, and the population is concentrated chiefly in the valleys and near the lakes. Yunnanfu is the capital of the Province and is situated in this table-land. Before the Mohammedan Rebellion it was a much more populous city than at present. From this place radiate numerous highways communicating with the other parts of the Province.

In appearance the Province of Kweichow is very similar to Yunnan, being a large table-land covered with mountains and peaks. These are highest in the southwestern part, the valleys lying at an elevation of 5,000 to 6,500 feet, while the summits rise to 8,000 to 9,000 feet. The mean altitude of the table-land is about 4,200 feet. Limestone is the predominant rock. Here and there it underlies alluvial basins of recent formation or is veined by seams of porphyry and granite.

Schist and red sandstone are also frequently encountered. On account of its mountainous character, communication is more difficult in Kweichow than in any other Province in China. The soil is exceedingly poor, and, although its mineral deposits are great, they are almost totally neglected. It is perhaps one of the poorest Provinces in China. The principal river in this Province is the Sikiang, or West River, which bounds the Province on the south. It is, however, scarcely navigable in this part of its course and flows between high hills of sandstone. It is obstructed by many rapids and rocks. Farther to the southeast, in the Province of Kwangsi, it forms the principal river, flowing southeast.

The physical characteristics of Kwangsi are similar to those of Kweichow, this Province also being mountainous and sparsely settled. It is, however, very well irrigated. The population is chiefly in the east and southeast.

Kwangtung, which is the most important Province in this consular district and the only one with any seacoast, is also for the most part a mountainous region. It has, however, a large plain extending over the delta of the West River and the lower part of the North River, and this part of the Province is by far the most thickly populated and the richest. The whole Province is very well watered and is provided with excellent means of communication through its rivers, numerous canals, and coast line. Along the coast are many islands; the largest of these is Hainan, and the most important from the commercial point of view is Hongkong.

The island of Hainan is 185 miles long by 120 broad and has an area of 13,900 square miles. The whole region is very mountainous, and there are peaks rising to an elevation of 5,000 feet. The mountains are rich in mineral resources, and the valleys and lowlands are exceedingly fertile. The coast is inhabited by Chinese, the aboriginal tribes living in the uplands of the interior. The chief city of the island is Kiungchowfu.

The island of Macao, which is situated at the extreme end of the West River delta, was settled by the Portuguese in 1557 and was, during the seventeenth and eighteenth centuries, a great trading center between China and Europe. However, since the cession of Hongkong to Great Britain in 1842, the trade of Macao has steadily declined.

Kwangchow, a bay on the Kwangtung coast, was leased to France in 1898 for 99 years. It is, however, without much importance commercially.

The capital and principal city of the Province is Canton, which is built on the banks of the Chu-kiang, or Pearl River. Up to 60 years ago it enjoyed a monopoly of the Chinese commerce with foreign nations. Since the rise of the port of Hongkong and the opening up of other treaty ports in China its importance has diminished, but it is still a very large manufacturing and commercial city. Large steamers are unable to reach Canton, but anchor at Whampoa, about 10 miles farther downstream.

CLIMATE.

The climate of Kwangtung is very changeable and depends on the dry northeast wind or the moisture-laden southwest wind. From October to April the former prevails, and in the neighborhood of

Canton seldom causes the temperature to fall below 35° F. The rainy monsoon occurs during the summer months. Though the temperature in summer seldom rises to 100° F., the moisture-laden atmosphere makes the heat very oppressive. The average annual rainfall during the past few years for Canton and vicinity has been about 80 inches.

The climate of Kwangsi is tropical in the south, where the heat is excessive from May to September. This heat is moist and occasions much sickness. The climate is more temperate in the north, but there are sudden changes of temperature and the cold is severe in winter. In the southern valleys the thermometer never falls below 37° F. and rises in summer to 100° and sometimes to 104°.

The climate of Kweichow is very moist, and dense fogs prevail throughout the whole Province, but particularly in the deep valleys of the south. Here during the five winter months, from October to February, there are rarely more than 25 days of fine weather. The climate is also very changeable. In summer the thermometer rarely reaches 86° F. on the table-lands, while in winter it falls to 18°.

In lower Yunnan Province there are continuous fogs and rainfall every day. At the bottom of the valleys the climate is tropical, suffocating, and insalubrious. On the high table-lands in the northern part of the Province the air is pure and the temperature mild and agreeable. The thermometer reaches 80° to 85° in the summer, but seldom falls below 32° in the winter. The dry season extends from the end of September to the middle of May, and the wind then blows from the southwest. The rainy season is from the middle of May to the end of September. The dampness, however, is not excessive.

POLITICAL SUBDIVISIONS.

Each of the Provinces in the Canton consular district is presided over by a military governor, or "Tu-chun," who is directly in charge of the military affairs of the Province. There is also a civil governor, or "Sheng-chang," who has charge of the civil affairs of the Province. The "Lu-chun," or regular army, is under the control of the military governor, while the "Ching Wei Chun," or Guards, are under the control of the civil governor. At the present time, in Kwangtung Province, the forces under the command of the civil governor are almost equal in number to the regular army under the military governor. These officials are both appointed by the central Government at Peking.

The conduct of foreign affairs is in charge of an official appointed by the President of China but recommended by the Board of Foreign Affairs. There is at present a commissioner of foreign affairs at Canton, one at Pakhoi, one at Swatow, one at Kiungchow, in Hainan—all in Kwangtung Province—and also one at Wuchow, in Kwangsi Province, and one at Yunnanfu, in Yunnan Province. This official, in addition to his duties as commissioner of foreign affairs, also usually acts as superintendent of Maritime Customs.

Directly under the civil governor is the provincial secretary, or "Cheng Wu Ting Chang," who acts as the mouthpiece of the governor, and through whom all official communications to the governor must pass.

Other provincial officials are the commissioner of finance, the commissioner of police (having charge of all the police in the district), the secretary of the interior, the secretary of industry, and the secretary of education.

Each Province is divided into a certain number of circuits, or "Tao." Each of these subdivisions is presided over by an official called the "Taoyin," or intendant of circuit. The Taoyin is responsible for the condition of his circuit, and makes his report either to the governor at the capital of the Province or, in some exceptional cases, directly to the central Government at Peking. Each circuit is further subdivided into a number of districts, or "hsien," each one of which is presided over by a district magistrate. These officials are appointed by the high provincial authorities, but must be confirmed by the central Government. The district magistrate is the chief authority in the district and has both executive and judicial authority.

The numbers of circuits and districts in the four Provinces are as follows: Kwangtung, 6 circuits, 94 districts; Kwangsi, 6 circuits, 77 districts; Yunnan, 4 circuits, 96 districts; Kweichow, 3 circuits, 80 districts.

EDUCATION.

The old-style literary examination system was abolished in September, 1905. Since that time the educational policy of the Government has undergone many variations. Immediately following the abolition of the old-style examination system there was a great enthusiasm for popular education of a new style, particularly in South China, where a great many temples were dismantled, temple and monastery funds being diverted to educational purposes. In addition, some modern school buildings were erected and a considerable amount of school apparatus was obtained, principally from Japan. A great many schools were opened, and an elaborate curriculum was prepared on paper, but unfortunately there were not nearly enough teachers to impart the new knowledge. This burst of enthusiasm rapidly cooled, and then a considerable reaction set in. Riots took place when the tax collectors and census enumerators appeared to collect funds for the schools. The temple priests protested vigorously against the use of the temples for school purposes, and these protests met with much popular approval. Upon the outbreak of the revolution in 1911, a very large number of schools were closed and education was considerably neglected. Upon the restoration of peace after the revolution and the establishment of the Republican Government, there was a revival of popular enthusiasm in favor of western education. A number of schools were reopened. Particular attention was paid to the establishment of primary and secondary schools. Lectureships were established by the commissioner of education in all the district cities of Kwangtung Province, the object of these lectures being to give the common people who were too old to go to school a glimpse into some of the phases of the new learning. Also, a number of students were sent abroad at the expense of the Government.

Since the second revolution of 1913, a considerable setback has been given to Government education. The office of the commissioner of education was abolished and a secretary of education was appointed, whose office was in the Yamen of the civil governor. Outside of the principal cities of the Province, there is a tendency to go back to the old forms of instruction. In many of the primary schools learning derived from foreign countries is either discarded or put into an inferior position.

The course of instruction provided by the Government schools is as follows:

First comes the primary school, covering a period of four years, followed by the secondary school of three years. These are supposed to conform in general to the grade schools in the United States. The study of Chinese as a language, as literature, and as history takes up the greater part of the time, though arithmetic, geography, rules of conduct, some nature study, and some elementary science are also given.

Following the secondary school comes the middle or high school, which gives a four-year course. The last year in this school is about two or three years below the corresponding year in an American high school.

The proportion of the population able to read and write is relatively higher among the Cantonese than among the inhabitants of most other Provinces in China. In Canton itself a large proportion even of the lower classes are able to read and also to write. However, among the boat people of Canton, who, as has been mentioned, are quite separate from the Cantonese, the proportion of illiteracy is exceedingly large, as it is also among the inhabitants of Kwangsi and Kweichow. The percentage of women of all classes who can read and write is relatively much smaller than in the case of men, and this may be said to be true of the entire country.

SCHOOLS IN KWANGTUNG.

The number of elementary schools (primary and secondary) in Kwangtung Province under Government supervision is 4,100, with a total enrollment of 123,000 students. There are also 46 middle schools in the Province, of which 11 are in Canton. Other schools are: Normal schools, 9; law schools, 9; agricultural schools, 3; silk-culture schools, 1; industrial schools, 5; commercial schools, 5.

There are 658 mission schools in Kwangtung, with 928 teachers and a total enrollment of 22,483 pupils. Of these, 53 are boarding schools for boys and 43 boarding schools for girls, with 4,256 and 2,147 students, respectively. There are 7 middle schools for boys, with an enrollment of 400 students. There is no school of college grade in the Province except the Canton Christian College. There is only one mission normal school in the Province—that of the Basle Mission at Kuchek, with 48 students.

There is a Presbyterian Training School for kindergarten teachers in Canton and a Baptist Training School for primary teachers at Tungshan, Canton.

The mission schools are gradually evolving a unified system and are cooperating in a Kwangtung Educational Association. As yet the vast number of students do not aim very high, only a small number graduating from middle schools. There were only about 40 graduates from mission middle schools in 1914.

The Canton Christian College is the oldest and best developed school under mission auspices. The college now owns about 100 acres of finely located land situated on the Pearl River about 2 miles below Canton, which contains 18 permanent buildings as well as a number of temporary structures. The value of this property is about $300,000 United States currency. The enrollment at present is as follows: Kindergarten and primary school, 114; grammar school (three years), 146; high school (5 years), 180.

There are four divisions of Kwangtung as regards the work of the Catholic missions: (1) That under the French Bishop of Canton; (2) that under the Portuguese Bishop of Canton; (3) that under the Italian bishop residing in Hongkong; (4) that under the French bishop residing at Swatow. Altogether these missions have 67 schools for boys and 39 for girls.

In addition to the above, there are a number of private schools in the Province, about which very little information is obtainable. The number of private tutors in the city is about 1,200.

EDUCATION IN YUNNAN PROVINCE.

The development of education in Yunnan Province, considering the poverty and the scarcity of population, has been somewhat more rapid than that in the richer neighboring Province of Kwangtung. There are at present approximately 5,000 schools of all grades in the Province under Government control, with a total enrollment of 200,000 pupils. There are nine middle schools located in the larger cities of the Province, with 2,000 students. There are seven normal schools for boys, with 1,477 students, and two normal schools for girls, with 300 students. At the capital of the Province, Yunnanfu, there are located the following: One law school, 510 students; one commercial school, 143 students; one agricultural school, 412 students; one mining school, 305 students; three manual training schools, 235 students; one military school, 200 students.

Missionary education in Yunnan is not carried on to the extent that it is in Kwangtung. The China Inland Mission has about 13 schools with about 400 students. The Methodist Mission at Chiotung has a school with about 300 students, which is the largest Protestant mission school in the Province. There are also in the Province a number of schools under Catholic supervision. At Yunnanfu the French Government supports a school for boys with 120 students and one for girls with 80 students. A similar school for boys is located at Mengtsz. These three schools are supported by grants from the Government of Indo-China.

EDUCATION IN KWANGSI AND KWEICHOW PROVINCES.

Government schools similar to those in Kwangtung and Yunnan are established in Kwangsi and Kweichow Provinces, there being about 1,400 elementary schools with 60,000 students in Kwangsi and 1,050 schools with 42,500 students in Kweichow. In Kwangsi there are also 23 middle schools, two normal schools, and one agricultural school. Missionary work is carried on in these two Provinces along the lines indicated above.

EXTENT OF USE OF MODERN SCHOOL SUPPLIES AND HOSPITAL EQUIPMENT.

There is at present small demand for modern imported school supplies and apparatus except in schools and colleges under missionary supervision. The Chinese are adepts at woodworking, and furniture, blackboards, and other equipment can be manufactured locally much more cheaply than these supplies can be obtained from abroad.

As a rule, the hospitals are equipped with as much modern apparatus as their means will permit. At best, however, they are inadequately furnished in this particular.

The use of modern school and laboratory apparatus and supplies is certain to increase if the Government schools are placed on a more modern and up-to-date basis. Heretofore most of these goods have come from Japan, which has built up a considerable trade in this class of goods all over China, particularly in scientific and demonstration apparatus to be used in the laboratory and classroom.

AGRICULTURE.

A very large part of the Canton consular district, being mountainous, is not available for agricultural purposes, but the plains and valleys—particularly the rich and fertile regions of the Canton delta—are cultivated to the utmost extent possible.

The farmers of South China, like those in the other parts of the Republic, do not live in isolated farmhouses as do the farmers in America; on the contrary, they live together in villages and go out each morning to cultivate the fields, returning in the evening.

Taking an average for the four Provinces, it is found that about 50 per cent of the land holdings are less than 20 mow in extent (a mow or Chinese acre equals one-sixth of the American acre), while only about 5 per cent are over 150 mow.

RICE, THE PRINCIPAL CROP.

Rice is the principal crop, particularly in the Canton delta district, where two and sometimes even three crops are produced yearly. Rice requires a very low-lying soil and plenty of water for its cultivation, and this is afforded by the annual rise of the rivers and also by irrigation, for which latter purpose water wheels and also tread mills are extensively used. The first crop of rice is sown in March, transplanted in April, and harvested in July. The second crop is sown in July or August, transplanted a month later, and the harvesting takes place in November or December. One mow (one-sixth of an acre) of first-quality land will produce about 3½ piculs (467 pounds) of rice; a mow of second-quality land will average 2.40 piculs (320 pounds), while third-quality land produces about 1.70 piculs (226 pounds). Rice fields are generally worked under leases, only a small percentage of the people working their own lands. The "ancestral halls" of the villages own considerable areas of agricultural lands, which are leased for short terms, the rental varying from $4 to $10 subsidiary coin per mow. After the harvest, part of the crop is sold and part reserved for the daily ration. In addition to rice, beans, groundnuts, and vegetables are grown and sold, the proceeds of which are sufficient for the farmer's daily expenses. When lands are leased from a wealthy landowner, the rental is usually paid in grain. The market price of rice varies from

$3.50 to $4.50 Mex.[1] per picul (133⅓ pounds). The growing of rice is encouraged, as is also its importation from abroad, while on the other hand its exportation is prohibited by the Government. In other words, as it is the staple food of the people every precaution is taken to see that a sufficient supply is on hand to prevent a famine.

SILK PRODUCTION.

The growing of the mulberry tree and the rearing of silk worms is an important industry, particularly in Kwangtung, although silk is raised in the other Provinces as well. The mulberry bushes are usually grown along the banks of streams. They put forth leaves from six to eight times during the year. As soon as these leaves mature they are stripped from the bush by the Chinese and fed to the silk worms. Six crops of silk are produced each year, and any flood or other disaster that produces a shortage of the mulberry crop is immediately followed by a scarcity of cocoons and a consequent shortage in the silk crop. The silk worms are reared on large frames of twisted bamboo, on which they spin their cocoons. These cocoons are then gathered and brought to market, where they are sold to the silk filatures. The chief silk-producing area is in the northeastern part of the delta of the West River. In this district, within a radius of about 40 miles, there are approximately 180 steam filatures, each employing an average of 500 girls.

While Canton raw silk is in some respects superior to the silk of other producing centers, yet at present the same attention is not given to the rearing of the silk worm and the winding of the raw silk as is paid in the sericultural districts of Europe and Japan. In the latter places the eggs and parent moth are subjected to examination and no diseased worm is allowed to spin a cocoon. In the Canton silk districts, on the contrary, the methods employed are very haphazard. The infection of healthy worms by diseased worms is very great. The advent of the steam filature is said also to have caused a deterioration in the quality of the silk. In former times the farmer raised the worms and reeled the silk himself, and it was thus to his interest to minimize disease and to allow the worm its full time of six days to spin the cocoon. Now the farmer sells his cocoons to the filature according to weight (after a certain examination by the buyer), and his energy is directed to producing quantity rather than quality of cocoon. The method of reeling the silk in vogue in the filatures of Canton is not up to the standard of the other producing centers, as the thread is not uniform and contains more large knots, slugs, and waste than the others.

Canton silk has a peculiar quality, owing to its spongy and soft nature, which enables the fiber to take up a greater proportion of dye than other sorts. The only silk to approach it in this quality is the wild silk of North China and the Indian silk called "Tussore" or "Tussah," but the latter is so impure as to show heavy loss in working.

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[1] Because of the striking changes in the value (expressed in United States currency) of the silver dollars used in China, it has been deemed impracticable in this handbook to convert "Mex." values to American gold. The term "Mex.", it should be explained, is ordinarily used in China in referring either to actual Mexican coins or to the Yuan or other silver dollars minted by the Chinese Government. During the time that the material for this handbook has been in course of preparation, the value of this silver currency has varied very widely, and it has consequently been impossible to assign, for conversion purposes, a definite value that would afford any real guide to the reader. The following values have been assigned to the "Mex." dollar by the United States Treasury Department (the value of the Hongkong dollar being practically the same): Jan. 1, 1914, $0.471 United States currency; Apr. 1, 1914, $0.458; July 1, 1914, $0.458; Oct. 1, 1914, $0.432; Jan. 1, 1915, $0.397; Apr. 1, 1915, $0.394; July 1, 1915, $0.399; Oct. 1, 1915, $0.3841; Jan. 1, 1916, $0.4172; Apr. 1, 1916, $0.4574; July 1, 1916, $0.5462; Oct. 1, 1916, $0.5397; Jan. 1, 1917, $0.5908; Apr. 1, 1917, $0.6365; July 1, 1917, $0.6543; Oct. 1, 1917, $0.7717; Jan. 1, 1918, $0.7514; Apr. 1, 1918, $0.7497; July 1, 1918, $0.7857; Oct. 1, 1918, $0.7857; Jan. 1, 1919, $0.7857; Apr. 1, 1919, $0.7857; July 1, 1919, $0.8706.

Raw silk forms the principal item of export from Canton, amounting ordinarily to about 46,000 bales annually. In addition, there are usually exported about 31,000 bales of waste silk and 5,000 or more bales of pierced cocoons. These latter are the cocoons from which the chrysalis or moth has been allowed to escape for breeding purposes. Before the European war, about two-thirds of Canton's raw silk was exported to Europe, Lyon and Italy being the principal markets. Since the outbreak of the war, an increased percentage has been shipped to the United States; this country now takes more than half of the total export, the remainder going to Europe. The local consumption of silk for spinning and weaving purposes is also very great.

CULTIVATION OF STRAW FOR MATTING INDUSTRY.

The cultivation of straw for the matting industry is carried on chiefly in the districts of Tungkun and Lintan in Kwangtung Province. The straw seed is planted in sheltered spots during the month of November and transplanted about the end of January or the beginning of February into fields that have been previously covered with several inches of water. The fields are frequently irrigated and cultivated until harvest time, which is July for the common grades of straw and August for the better grades. The straw varies from 5 to 7 feet in height. When harvested the three-cornered reed is split and laid out in the sun to dry. When the straw is dry it is tied into bundles of 1 picul (133⅓ pounds) each and sold in the open market at various prices based on demand. For the manufacture of matting it is carefully sorted as to quality and size. Straw selected for dyeing is generally of poorer quality, as its defects do not show up so readily.

GROWING OF CANE AND MANUFACTURE OF SUGAR.

The production of sugar cane and the manufacture of sugar forms one of the principal industries of this region. Several varieties of sugar cane are produced. The native methods employed in the manufacture of sugar are very crude. The machinery consists of two wheels (turned by cattle) to crush the cane and three caldrons to boil, thicken, and then granulate the juice. The juice is settled with lime and afterward clarified with eggs. In addition to these native methods, several sugar refineries have also been established at Hongkong. The greater part of the cane is exported to Hongkong, where it is manufactured, and the sugar is then reshipped into China.

The poppy plant, although its cultivation has been strictly forbidden by the Government, is still cultivated to a certain extent in the remote interior districts of Yunnan and Kweichow.

EXPORTATION OF TEA.

Tea is grown to a considerable extent in many districts in Kwangtung and Yunnan, and still forms a considerable item of export from Canton and its neighboring ports. The export of so-called "black tea" from the various ports within this consular district has averaged between 7,000,000 and 8,000,000 pounds for the past few years. Very little of this tea is shipped from Canton directly to the United States, although some of the Kwangtung exports doubtless find their way there eventually.

MISCELLANEOUS CROPS.

Wheat is cultivated to a certain extent in the northern part of Kwangtung and also on the high table-lands of Yunnan. Other crops include Indian corn or maize, groundnuts or peanuts, tobacco, and ginger. Small quantities of oats, barley, and rye, as well as potatoes, are raised, the latter being for the most part grown in Kwangsi.

CASSIA BARK, BUDS, AND OIL.

The cassia tree (*Cinnamomum cassia*) is grown in some parts of Kwangtung, but chiefly in Kwangsi Province, and the exportation of cassia bark, cassia buds, and cassia oil is carried on to a considerable extent through the port of Canton. The cassia tree is propagated by seeds in nurseries and, when a few inches high, is planted on the hillside, where it requires no care or fertilizer to aid its growth. In six to seven years it reaches a height of 7 to 8 feet, with a trunk 5 inches in diameter, and it is then cut down at the roots. The season of cutting is between April and June. The roots are then covered with mud, and after six years the tree has reached its former growth, when it undergoes another cutting. Its life is about 30 years. The bark is stripped off by running a knife along the branch on both sides and then gradually loosening it. After it is taken off it is allowed to dry for 24 hours, during which period it undergoes a kind of fermentation, and the epidermis is easily scraped off. The bark soon dries into the quilled shape in which it is shipped to America. Thin pieces having an agreeable spicy taste when chewed and a tolerably smooth surface are the best kind.

Cassia buds and cassia twigs form a separate article of commerce. The former are the fleshy ovaries of the seeds; they are pressed at one end so that they somewhat resemble cloves in shape.

Cassia oil is obtained from the leaves and twigs of the cassia tree by distillation.

Cassia is used for various purposes in carpentry, medicine, perfumery, and cookery. It is exported from Canton in both bales and cases, each weighing ½ picul (66⅔ pounds). The exports of cassia from Canton ordinarily amount to 18,000,000 to 20,000,000 pounds annually. The price of cassia bark has risen considerably of late.

TIMBER AND FRUIT TREES.

The greater part of this region is, like other parts of China, bare of forests. However, there are certain wooded sections, particularly in the mountainous tracts of northern Kwangtung, Kwangsi, and Kweichow, and these furnish a considerable amount of timber for use in building and other industrial purposes. Considerable quantities of firewood are shipped from these regions to Canton.

In addition to the pine forests, there are extensive groves of bamboo throughout the district. Bamboo is, perhaps without exception, the most useful article known to the Chinese, and its uses are almost without number. Rafts of bamboo poles are floated down the river to Canton and sold as they lie in the water.

This region abounds in fruit trees, among which may be mentioned the orange, lichee, peach, apricot, and plum.

FARMING METHODS.

Farming methods among the Chinese are extremely primitive. The tools used and the methods of planting and harvesting are much the same as they have been from ancient times. A small, weak plow is used, which does its work only superficially. The hoe and mattock are heavy, clumsy affairs of native design and manufacture. The rice is thrashed in the fields entirely by hand, the stalks being beaten against the sides of a wooden receptacle until the grain is all knocked out. There are, however, a number of hulling and polishing mills throughout the district, which are operated by steam. In the matter of irrigation, the Chinese are very skillful in the arrangement of water wheels to lift the water up to the level of the fields. Where there is not sufficient current to turn a wheel, treadmills are used.

DOMESTIC ANIMALS.

The water buffalo is used quite extensively by the farmers of South China as a beast of burden. It pulls the plow and the harrow. A considerable number of cattle and hogs are also raised throughout the district, principally in Kwangtung Province. These are shipped to Hongkong, and from there sent to the Philippines. A considerable amount of Chinese sausages and lard is manufactured in Canton and shipped to Manila, the United States, the Straits Settlements, and other places for the use of the Chinese living there. In Kwangtung Province are to be found very few horses or ponies, although farther inland, in Kwangsi and Yunnan, ponies are found to a certain extent. A good deal of poultry is raised throughout the district, and the exportation of eggs to Hongkong amounts to several thousand dozen per day. The rivers and coast of Kwangtung abound in fish, and fishing is the form of livelihood of a very large number of people.

MINERALS AND MINING.

The four Provinces constituting the consular district of Canton possess mineral resources of great variety and richness. Gold has been washed for centuries from the waters of Hainan, and its presence in northern Yunnan is inferred from the name that the Yangtze bears in its course through the upper prefectures of that Province—"The River of Golden Sand." Silver mines are found in all four Provinces and are being worked at Pakshektong, Kwangtung, and Kweihsien, Kwangsi. The most important deposits that have been tapped to any extent in this district are the stanniferous lodes at Kotchiu in Mengtsz-hsien, Yunnan. Only at the tin mines of Kotchiu has any considerable advance been made toward modern scientific mining. Copper is found in northern Yunnan and in Kweichow. Besides the minerals just mentioned, iron, coal, antimony, orpiment, lead, and quicksilver are found in various sections of the district in varying quantities and of different qualities.

COAL.

Coal is to be found in all four Provinces. According to an estimate made by Drake in "Coal Resources of the World," the following are the figures for the coal resources of the four Provinces: Yunnan, 300,000,000,000 metric tons; Kweichow, 30,000,000,000 metric tons; Kwangsi, 500,000,000 metric tons; Kwangtung, 1,009,000,000 metric tons. Later estimates, however, seem to indicate that the estimates for Yunnan and Kweichow are too large.

According to statistics compiled by the Chinese Geological Survey, the annual production of coal in these four Provinces is approximately as follows: Yunnan, 86,000 metric tons; Kweichow, 100,000 metric tons; Kwangsi, 10,000 metric tons; Kwangtung, 12,000 metric tons. These figures are known to be inexact, as none of the mines in these four Provinces are worked by modern methods. The coal is obtained from hundreds of small shafts at widely scattered places, and anything like a close approximation of the output is impossible.

The most important coal fields in Kwangtung Province are situated in the vicinity of Shiuchow, in the northern part of the Province along the North River. Within a radius of 15 miles from the city of Shiuchow there are 10 mines operated by different companies, some of which work regularly and others intermittently. All of them work without machinery. However, the two larger companies, the Liang Kwang and the Hip Hing, are developing their properties on a modern system with a view of installing machinery as soon as the properties have sufficient tonnage blocked out to warrant the expenditure on up-to-date equipment. Some of the old workings in this vicinity date back a century, but all of the mining done in the past has been superficial and not followed to a great depth. Very few mines have exceeded 300 feet below the level of the general country. This may be traced to two causes: First, with only crude bamboo pumps it was found to be too expensive and too stupendous a task to handle the mine water; second, proper ventilation was very difficult without the aid of mechanical means, and not only did the insufficiency of fresh air cause difficulty in breathing and thereby reduce the working capacity of the miners but the air circulation was too feeble to dilute and carry away the obnoxious gases from the workings.

In addition to the mines near Shiuchow, coal is also found in the districts of Far Yuen and Ko Ming and at places along the East River.

Most of the coal mined is dusty. The proportion of lumps is usually small. The lumps crumble to dust on long exposure to the elements. Most of the coal burns with a short purplish-blue flame and without smoke or the odor of sulphur. Some of the seams produce a coal that burns with a moderately long yellow flame. The former might be classed as semianthracite coal, with from 7 to 11 per cent of volatiles, and the latter as a bituminous coal, with from 12 to 20 per cent of volatiles. The semianthracite is principally used for lime burning, wine distilling, and to some extent for cooking. The bituminous coal finds its place in mixing with imported bituminous coal for steaming purposes. So far, neither the local government mining bureau nor any private concern has taken pains to investigate the conditions necessary for the burning of this coal in order to obtain the best heating results. All the power plants and steamers in and about Canton have been designed to burn Japanese, Kaiping, or Manchurian bituminous coal. It goes without saying that no just estimate of local anthracite coal can be formed when it is burned on grates so designed.

TIN.

The principal tin mines in the district are the Kotchiu mines at Mengtsz-hsien, in Yunnan Province. These mines cover an immense area and have been operated by the natives for centuries. It is probable that, at the present time, a smaller amount of tin is being mined than was the case before the Mohammedan Rebellion, when the number of employees is stated to have been at times more than 100,000.

The deposits occur both on the surface and beneath it. The shafts are sunk into the hillsides at an angle usually of 45° and are started at random without previous test borings. Many of the shafts reach a depth of more than half a mile, but, because of their horizontal direction, require no ore-lifting apparatus. They are, without exception, extraordinarily narrow and low; the roomiest shaft is stated to be only 4 feet high and a little more than 3 feet wide. For miners half-grown boys are in demand. In some of the shafts an attempt has been made to assist the circulation of the air by means of wind boxes or bellows. A considerable source of riches is said to lie in the Kotchiu mountain system, the whole of which is believed to contain tin ore. The greatest drawback to increased production is the want of water for washing purposes. The rainy season rarely lasts for more than three months, and, for lack of artificial means of conserving the water supply, the ore can be worked with a profit for only about six months in the year. The native process of washing the ore is somewhat similar to the modern hydraulic system. It is accomplished by digging trenches before the time for the big rains. The average ditch is from half a mile to a mile in length, with sufficient slope to cause a gentle pressure.

The Yunnan Tin Trading Co. conducts a modern ore-dressing plant and smelting works at Kotchiu. The ore-dressing plant contains 5 trammels for first washing of the low-grade ore, 2 ball mills, with 4 gigs each for grinding the coarse ore, and 1 large tube mill for grinding the finer ore, 52 washing tables of three models (the Wilfley, the Ferraris, and the Frue Vanner), and 12 hydraulic classifiers. The smelting works contain 3 gas generators, supporting 6 reverberatory furnaces, 3 refiners, and 1 blast furnace for handling slag. Each furnace has a capacity of 4 tons of ore per charge, each charge being mixed with sand and charcoal in proper parts, according to the grade of the ore. The average requires 18 hours—or from 12 to 30 hours, according to the grade of coal and the purity of the ore. The smelting works cast the ingot in the iron mold, analyze, and sell according to purity, but they also conform to the peculiar Chinese practice of casting in sand molds. The ingot cast in the sand mold is not sold upon analysis, but the surface indications of the ingot form the basis upon which the purchase is made. The capacity of the Kotchiu Smelting Works is about 18 tons per day, but the native methods of mining and hauling both the ore and the coal only permits the smelter to operate for six months of the year and limits the daily output to about 9 tons.

In addition to the smelting works above mentioned, there are numbers of native smelting ovens in this district. These are constructed of clay bricks at a cost of about $1,000 each. The bellows used are of wood, and each requires three men to work it. The ovens are fired in November and continued in use for three months. According to a British report, one oven will turn out between 1,500 and 1,700 pounds of tin per day. It is stated that these native ovens are able to compete successfully with the more modern plant of the Yunnan Tin Trading Co.

Shipments of tin from these mines to the United States are all made through the port of Hongkong, there being at present no direct shipment from the mines.

Tin is also mined to some extent in Kwangsi Province and at Nodoa, in Hainan. The output of the mine at the latter place is exported to Singapore.

A report from the Hongkong consulate general, dated May 19, 1919, had the following to say concerning Yunnan tin:

> As a result of the continued refusal of Europe and the United States to take South China tin at a rate which will make mining of the metal possible in spite of the low price in silver that present gold prices entail at current silver exchange, the production of tin in Yunnan Province, the basis of the tin industry of Hongkong, has all but completely collapsed. Estimates of production at the present time indicate that it has fallen off all the way from 50 to 80 per cent, i. e., the production of the Yunnan fields during 1919 will run only from 2,500 to 6,000 tons, in place of the 12,000 tons last year. Under present exchange there is little chance of any revival of the trade. The situation has come to be so serious in the mining fields that a great proportion of the miners have left work and have sought other employment, thus not only reducing the possibility of production at the present time, but destroying the organization on which future production in a large measure must rest.

ANTIMONY.

Antimony ore is produced in many districts in the Provinces of Kwangtung, Yunnan, and Kwangsi. In Kwangtung the ore is found chiefly in the Kook Kong district, on the North River. It occurs generally in large bowlders and in the sulphide form (very rarely in oxide form). At the present time several antimony smelters are established in Canton and Hongkong for the refining of the ore, and in Yunnan the Chih Ts'un Antimony Smelting Works have been doing a considerable business. These smelters, though crude, are able to turn out regulus running 99 per cent pure.

COPPER.

There are extensive deposits of copper in the regions of northern Yunnan and also in Kweichow. However, owing to the expenses of transportation by the railway through Tongking and thence to Chinese ports, practically none of this copper has hitherto been exported. On the contrary, the Government has found it necessary to purchase quantities of Japanese copper for the use of the various mints.

IRON.

Iron ore is found in Kwangtung, Kwangsi, and Kweichow. In Kwangtung it is found in the districts of Fong Cheng, near Pakhoi, and also north of Waichow on the East River. Hematite seems to be the principal ore. Near Fong Cheng, manganese is also found with the iron deposits. The iron ore is smelted in the crude native way, mostly into cast iron, from which many domestic cooking utensils and other household articles are made. The manganese ore is sold to the Hanyang Iron Works at Hankow.

LEAD—MOLYBDENUM—ZINC—QUICKSILVER.

Lead is found in Ko Yao district, Kwangtung, and in Sun On, near the British New Territory.

Molybdenum occurs in sulphide form in the district of Yung Yuen, Kwangtung, and a company was organized to work on the property, but work was abandoned about three years ago.

Zinc spelter is produced in considerable quantities in Yunnan, the exports of zinc having risen from 5,117 piculs (305 tons) in 1914 to 30,050 piculs (1,789 tons) in 1915.

Quicksilver mining has been attempted in Kweichow, but has met with very little success.

WOLFRAMITE.

During 1918 wolframite ore was mined and marketed in large quantities. War conditions created a demand for tungsten steel in the United States and Europe which led to the general development of this ore, and during 1918 it became one of the leading articles of export. By the middle of March, 1919, however, the production of the ore had almost ceased because of the decline in price, which in some cases was less than the cost of production. Shipments of the ore during 1918 totaled in value 3,140,220 taels ($3,746,282). Most of the veins are small and are in hard rock formation, averaging about 2 inches in width. The mining of this ore now requires extensive blasting operations.

PRECIOUS METALS.

As regards the production of the precious metals, gold and silver, it may be said that although there are undoubtedly mines and workings at various places in the different Provinces it is very difficult to obtain any information concerning them, since they are only small workings. During the past few years there have been one or two attempts by joint foreign and Chinese companies to operate gold mines in Kwangtung Province, but it has been found necessary to abandon the enterprise from one cause or another, usually through lack of funds. The only gold mine under joint foreign and Chinese management at present in operation is the Mo Fung Shan Gold Mining Co., in Tseng Cheng district, Kwangtung.

DIVISION OF MINES.

The mining affairs of the Provinces are under the direction of the division of mines, which is an office under that of the commissioner of finance. In Kwangtung Province, the division employs two secretaries and two technical engineers to look after the work. The engineers are appointed by the Ministry of Agriculture and Commerce at Peking. When a person or organization applies for a mining claim, a map, in triplicate, is to be sent in, showing the location and boundaries of the claim, together with an application, in duplicate, for prospecting. The commissioner, in turn, sends a copy of the map and application to the magistrate of the district in which the claim in question is located for the latter's investigation. If the magistrate reports favorably upon the claim, assuring the government that no disturbance to the public is to be caused and that there are to be no encroachments upon private property rights except with the consent of the owners, the commissioner approves the application and refers the matter to the Ministry of Agriculture and Commerce for final sanction. The claim is thus registered, and prospecting and developing work can begin. As to mining, a further application is to be sent in proving that a mining permit is warranted.

RESTRICTED USE OF FOREIGN MACHINERY.

In Kwangtung Province practically no foreign machinery is used for mining purposes. The Mo Fung Shang Gold Mining Co. is the only company known to use any foreign machinery. This mine has a small three-stamp mill with a Huntington mill as a regrinder. In the lead mine that is operated in the British New Territory, in the vicinity of Kowloon, there are two 5-stamp batteries with three Wilfley tables as concentrators. Foreign pumps are used in one or two instances in the coal properties, but they are hand pumps.

The chief mineral deposits in Kwangtung occur on the island of Hainan. They deserve the attention of mining engineers, since very little is known of the mineral resources of this district. According to reports of Chinese, the island is very rich in minerals.

In the Tseng Sheng, Pun Yu, Lo Ding, and Ching Yuen districts of Kwangtung Province gold is found in the streams, and if systematic prospecting is carefully carried out promising gold properties may be found.

At the present time there is very little opportunity for the introduction of mining machinery.

COMMUNICATIONS: GENERAL INTRODUCTION.

The great outlet for the trade of Kwangtung, Kwangsi, and Kweichow Provinces is the port of Hongkong. Situated as it is at almost the mouth of the Sikiang or West River delta, it is easily reached by steamers and junks from the entire territory drained by the West River and its tributaries. Lines of steamers run between Hongkong and Canton, Hongkong and Wuchow, Hongkong and Kongmoon, and Canton and Wuchow, the latter city being the most important trading center in Kwangsi Province.

Yunnan Province, situated on the border in close proximity to both French Indo-China and Burma, has a considerable trade with both countries. The French railway that connects Haiphong, the capital of Tongking, with Yunnanfu, the capital of Yunnan Province, and forms the connecting link between Yunnan and Tongking, is the route by which most of the foreign goods are imported into Yunnan. Trade with Burma, having to pass through an exceedingly mountainous and rough country, is carried for the most part on pack animals, no railways or water communications connecting Burma with Yunnan. There is also considerable communication between Yunnan and Kweichow and the Provinces of Szechwan and Hunan on the north.

WATERWAYS.

In Kwangtung Province the principal method of communication is by water. The three principal rivers are the West, North, and East Rivers. Of these, the chief is the West River, which rises in the eastern part of the Yunnan table-land, flows on the border between Kweichow and Kwangsi for a distance of 160 miles, and then takes a southeasterly course, passing through the center of Kwangsi and Kwangtung. At Samshui (30 miles from Canton) it is joined by the North River and forms the Canton delta. During the flood season vessels drawing up to 16 feet of water can reach Wuchow on the Kwangsi border, a distance of 240 miles from Canton, but in ordinary times only vessels whose draft is not more than 6½ feet can reach the latter port. A line of shallow-draft stern-wheel steamers of about 400 tons operate between Wuchow, Canton, and Hongkong. Beyond Wuchow communication is by small steamer and steam launch as far as Nanning, the capital of Kwangsi, and also Lungchow and Poseh. There are about 55 launches and motor boats plying on the West River and its branches between various cities and towns in the Province of Kwangsi. The motor boats use kerosene and crude oil.

In addition, numerous junks and small native craft of every description ply up and down the entire length of the West River and throughout all its branches. The principal method of communication throughout the delta is by native passage boat, towed by a steam launch. These steam launches are built for the most part in Canton or Hongkong and are of 50 to 100 tons burden. The passage boat or junk is towed astern and is capable of accommodating several hundred passengers in the cramped quarters in which the Chinese travel. The boat has accommodations for three classes of passengers—first, second, and third. There is no definite rate of tariff based on mileage, but fixed systems of charges are adopted between various points.

RAILWAYS.

There are four railways in Kwangtung Province—the Canton-Kowloon Railway, the Canton-Hankow Railway, the Canton-Samshui Railway, and the Sunning Railway. There is one railway line in the Province of Yunnan, connecting the capital with French Indo-China. There are no railways in Kwangsi and Kweichow Provinces.

CANTON-KOWLOON RAILWAY.

A line 111 miles in length connects Canton with Kowloon, on the mainland opposite Hongkong. It consists of two sections—the British section, 22 miles in length, between Kowloon and Samchun, a town on the border between British and Chinese territory, and the Chinese section, between Samchun and Canton, a distance of 89 miles. The road was opened for through traffic in October, 1911.

The original agreement for the construction of the Chinese section was signed in 1898, but it was not until August, 1907, that the survey was commenced and not until June, 1908, that actual construction work began. The funds were supplied by the British & Chinese Corporation (Ltd.), and the construction and equipment were carried out by British engineers. The original loan was for £1,500,000, guaranteed by a mortgage on the line. The cost of construction work, including all charges for rock, earth, and protection work, was approximately $73,150, United States currency, per mile. Much of the road lies through a hilly country, giving it a ruling grade of 1 in 150. Fifty-six per cent of the line is on grade and 44 per cent on level. There are no tunnels on the Chinese section, but the earthwork is, on the whole, heavy, and the bridges, culverts, etc., numerous.

There are 46 girder bridges, with a clear opening of 4,868 feet, and 39 arched bridges, with an opening of 546 feet. The rails were supplied by the Hanyang Iron & Steel Works, of Hankow, China, as were also the fastenings, with the exception of the fishplates. The sleepers were obtained from New South Wales and are mostly of eucalyptus, 8 feet by 9 inches by 5 inches. The frames and bogies of the cars were constructed by the Metropolitan Carriage & Wagon Co., of Birmingham, and the superstructure by the Hongkong & Whampoa Dock Co., of Hongkong, and the Tangshan shops of the Railways of North China. The passenger coaches are 61 feet long over platforms, with four-wheel bogies and bodies of teak. The first and second class coaches are lighted with electricity and have high dome roofs with torpedo ventilators. The trains have Westinghouse air brakes throughout and are connected up with central couplers. The first-class cars have a side corridor with coupes and a card saloon, and rattan seats and cushions. The type of locomotive adopted is 2-6-0, outside cylinders, 19 by 24 inch stroke, double bogie tender for 3,500 gallons of water and 5½ tons of coal. The weight of engine and tender loaded is 101½ tons, the maximum axle load is 16½ tons, and the diameter of driving wheels is 5 feet. The engines were manufactured by the North British Locomotive Co., of Glasgow. There are about 10 locomotives on the Chinese section.

The main source of revenue for the line is in its passenger traffic. The estimated earnings of the Chinese section for the year 1918 were $988,925, about 80 per cent of which was derived from passenger traffic. The railway is operated at a heavy loss. As comparatively little freight is handled, the road does not run any trains exclusively for freight. The freight tariff on the Chinese section is as follows:

Classes.	Rate per English mile.	
	Per ton of carrying capacity.	Per picul (133⅓ pounds).
	Cents Mex.	*Cents Mex.*
First class	5	0.5
Second class	4	.4
Third class	3	.3
Fourth class	2	.2
Dangerous goods	10	.5

NOTE.—$1 Mex. normally equals $0.50 United States currency; on Jan. 1, 1919, however, $1 Mex. was worth about $0.78.

In all transactions in goods traffic the following equivalents are used: (*a*) One ton equals 16 piculs 80 catties; (*b*) 1 picul equals 133 pounds. In calculating the rates payable for the conveyance of goods or live stock, the minimum distance charged is as for 10 miles. A fraction of a mile is reckoned as 1 mile, and all rates are calculated to the nearest 5 cents.

Packages containing two or more classes of goods are charged on the weight at the rate for the highest class of goods the package contains.

All goods are carried by the railway at the owner's risk only, which absolves the railway from all claims whatsoever in respect of the goods so carried.

All consignments before loading must be weighed, and in case of goods chargeable by measurement the dimensions thereof must be taken. Freight charged by measurement is calculated on the basis of 3 cubic feet =1 picul (133⅓ pounds).

In calculating carload rate, the minimum sum of $6 Mex. is charged on 15-ton wagons and $10 Mex. on 30-ton wagons.

The passenger tariff is as follows: Canton to Sheklung (40.15 miles)—First class, $1.60 Mex.; second class, $0.80 Mex.; third class, $0.40 Mex. Canton to Samchun (88.73 miles)—First class, $4 Mex.; second class, $2 Mex.; third class $1 Mex.

The following quantities of luggage are allowed to be carried free of charge by each passenger: First class, 133⅓ pounds; second class, 100 pounds; third class, 50 pounds.

CANTON-HANKOW RAILWAY.

This line is to connect the two important industrial and commercial centers of Canton and Hankow, the latter being in Hupeh Province. When completed it will be approximately 720 miles in length. The distance within the limits of the Canton consular district is 212 miles—from Canton to the Kwangtung provincial boundary—and the road is completed and running between Canton and Hsiukwan, an important city in the northern part of the Province, a distance of 139 miles.

The original concession for the line was granted to the American China Development Co., an American syndicate. This concession also included the right to build a road from Canton to Fatshan and Samshui—Fatshan being a large manufacturing center of about 600,000 people, distant only 12 miles from Canton. Work on this section was started in 1902, and the line was completed through to Samshui in 1904. Work on the main line was begun at about the same time. However, in 1904, on account of friction between the American constructors and the Chinese authorities, the work was suspended. At about this time it became known that Belgians had acquired extensive interests in the American China Development Co., and a strong agitation was begun by the Chinese to cancel the concession of the American syndicate and build the line entirely with Chinese capital. Negotiations were concluded in August, 1905, and the Chinese, by the payment of $6,750,000 gold as a compensation to the Development Co., canceled the concession. The payment of this money was effected by a loan secured from the Hongkong Government. In June, 1906, the road was turned over to the merchants of the Provinces through which it is to run; they have assumed the loan, the Provinces of Kwangtung and Hunan to bear each three-sevenths and Hupeh one-seventh. The road is at present operated entirely by Chinese, and the construction work, which has progressed very slowly for the past few years, is now almost at a standstill. The principal reason for the slow progress has been the disagreements between the shareholders and the resulting changes of administration, but floods, landslides, etc., have also contributed their quota to delaying the completion of the line.

At present the line is not a success financially. This is due to the fact that the road depends for its success on the through traffic that will come to it when the line is completed through to Hankow.

In 1918 the passenger receipts amounted to approximately $670,000 and the freight receipts to $1,430,000. The goods carried include cattle, swine, firewood, limestone, coal, rice, poultry, tobacco, and salt.

The rails are 85-pound steel rails of American, Belgian, and Chinese manufacture, the Chinese rails being from the Hanyang Iron & Steel Works, of Hankow. The bridge girders and trusses are nearly all from the American Bridge Co., others being of Belgian and British manufacture. The locomotives in operation are products of the Baldwin and American Locomotive Works. During 1914 five consolidated locomotives were purchased from these two firms. The cars in use are of many kinds. The passenger cars are for the most part of American manufacture, the freight cars being of both English and American pattern. It seems likely that the short cars will soon be rejected and that only the eight-wheel American cars of all classes will be used. A great deal of the steel work used in connection with water tanks, turntables, warehouses, etc., was imported from the United States, as well as a considerable amount of Oregon pine for use as sleepers, etc. Some sleepers are also imported from the Philippines.

As stated above, the line as at present built is from Canton to Hsiukwan, a distance of 139 miles. Beyond Hsiukwan the only work that is completed is about 3 miles of grading and the piers for a bridge over the North River. This bridge will be the longest on the railway, 1,200 feet in length, consisting of five 200-foot and two 100-foot spans. A tunnel 1,400 feet long, 154 miles from Canton, is also partly constructed. The country to the north of Hsiukwan through which the road is to pass is very rough and mountainous and will furnish but little traffic. The only town of any importance through which the road will pass is Lokchong, 170 miles from Canton, and from this point on the road runs through extremely rough country to Pingshek on the border of Hunan.

The freight tariff is as follows:

Classes.	Rate per li (⅓ mile).	
	Per ton.	Per picul (133⅓ pounds).
	Cents Mex.	*Cents Mex.*
First class	2.2	0.22
Second class	1.8	.18
Third class	.9	.12
Dangerous goods	4.0	2.00

The minimum charge is for 50 li. Any part of a li is calculated as 1 li, and any part of a cent is calculated as 1 cent. The minimum weight is 1 picul. Any part of a picul is calculated as 1 picul.

Each pig is calculated as 1 picul, pigs (more than one) being charged according to weight as first-class goods.

Each crate of poultry weighing less than 1 picul is charged as 1 picul. Poultry in crates is charged according to weight in the same manner as pigs.

Cattle are charged at 1½ cents per head per li.

Excess baggage is charged at the rate of first-class goods.

The passenger tariff is as follows: Canton to Yingtak (87.63 miles)—First class, $4.35 Mex.; second class, $2.90 Mex.; third class, $1.75 Mex. Canton to Wushek (121.83 miles)—First class, $5.85 Mex.; second class, $3.90 Mex.; third class, $2.35 Mex. Canton to Shiuchow 139.28 miles)—First class, $6.75 Mex.; second class, $4.50 Mex.; third class, $2.70 Mex.

The following quantities of luggage are allowed to be carried free of charge by each passenger: First class, 133⅓ pounds; second class, 100 pounds; third class, 53⅓ pounds.

CANTON-SAMSHUI RAILWAY.

The Canton-Samshui Railway was originally a part of the concession granted to the American China Development Co., but it is at the present time under a separate management from the Canton-Hankow Railway. Under the agreement by which the road was redeemed from the American China Development Co., the Provinces of Kwangtung and Hunan each own three-sevenths of the line and Hupeh one-seventh. The line is only 32 miles in length, but runs through a very populous and fertile country, passing through the large town of Fatshan, with about 600,000 inhabitants. It is considered one of the best-paying lines in China in proportion to its mileage. The receipts during 1918 totaled $946,817, apportioned as follows: Passenger traffic, $896,423; freight traffic, $20,894; miscellaneous, $29,500. The total operating expenditure was about $650,000. The line is double-tracked between Canton and Fatshan. The rails, bridge material, and rolling stock are practically all of American manufacture.

The freight tariff is as follows:

Classes.	Rate per li (3/10 mile).	
	Per ton.	Per picul (133⅓ pounds).
	Cents Mex.	*Cents Mex.*
First class	1.65	0.17
Second class	1.35	.14
Third class	1.00	.10
Dangerous goods	4.00	2.00

The minimum charge is for 50 li (15 miles). Distance up to one-half li is charged as 1 li, and no charge is made for less than one-half li.

The minimum weight is 1 picul. Any part less than one-half picul is charged as one-half picul.

Each pig is calculated as 1 picul, pigs (more than one) being charged according to weight as first-class goods.

Each crate of poultry weighing less than 1 picul is charged as 1 picul. Poultry in crates is charged according to weight as first-class goods.

Cattle are charged at 1½ cents per head per li.

The passenger tariff is as follows: Canton to Fatshan (10.25 miles)—First class, $0.35 Mex.; second class, $0.25 Mex.; third class, $0.15 Mex. Canton to Samshui (30.40 miles)—First class, $1.10 Mex.; second class, $0.85 Mex.; third class, $0.55 Mex.

SUNNING RAILWAY.

This short railway, 78 miles in length, is operated in the Sunning and Sunwui districts of Kwangtung. These districts furnish a very great proportion of the immigrants to the United States. The road runs between the towns of Bokkai and Taishan, passing through the treaty port of Kongmoon. At Bokkai there are steamer connections with Hongkong and Macao. Materials are on hand for a 6-mile extension of this railway.

The railway is a private stock company, the entire stock being owned by Chinese, and the management of the road is altogether in Chinese hands. The capital is $4,360,120 local currency. The line has been financed, constructed, and operated by Mr. Hee Chin Gee. The locomotives, car wheels, and trucks were made in the United States, and the car bodies were built at the company's shops at Kungyik. The company also operates a ferryboat 350 feet long and 35 feet wide, able to carry 15 cars for ferrying over the Southwest River at Niuwan. The country through which the railway runs is very populous and fertile, but on account of the cheap water communication very little freight is carried by the road. The company, however, does an extensive passenger business.

The receipts during 1918 were $591,658 from passenger traffic and $143,914 from freight traffic. The total expenditure, including cost of construction materials, was $1,050,000.

YUNNAN RAILWAY.

The Yunnan Railway is a continuation of the French Railway of Indo-China. The Chinese section commences at the border between Yunnan and French Indo-China at Laokai and runs from there in a northwesterly direction to Yunnanfu, the capital of Yunnan Province. The length of the Chinese section is 289 miles, or 470 kilometers. The total length of the line is 530 miles, or 853 kilometers. The gauge is 1 meter. The continuation of the line south into French territory connects Yunnanfu with Hanoi, the capital of Tongking, and also with Haiphong, the chief seaport. The company operating the line is known as the Compagnie Française de Chemin de Fer de l'Indo-Chine et du Yunnan. Work on the Tongking section was begun in 1901. The capital required for the entire line was placed at 101,000,000 francs, and a French syndicate was formed to undertake the work under terms of receiving government support, it being arranged that the colonial government of Tongking should guarantee the syndicate an amount not exceeding 3,000,000 francs yearly, interest on the capital. This annuity was additionally guaranteed by the French Government. In the autumn of 1903 the conditions under which the extension was to be made into Chinese territory were finally settled, it being agreed that the line should be constructed by the French with French capital and without the Chinese Government guaranty, and that the duration of the concession should be 80 years. On the expiration of that period the railway was to revert to the Chinese Government. The completed line was opened to traffic on April 1, 1910.

The line runs through extremely rough country and construction work was very difficult. Instead of following the route of the main highway, which runs from Mengtsz via Manhao and traverses the chief cities, it was found necessary to follow the waterways and take a course some miles east of the old trade route, thus running through a more sparsely settled section. There are few large cities located on the railway. Construction work was also delayed by want of laborers. On one section of the line, through the Namti Valley, no less than 70 per cent of the coolies employed on the railway succumbed to malaria, which is very virulent in this valley, shut in as it is between two walls of mountains. Landslides and other causes were also responsible for a great loss of life.

The track is laid with steel ties and ballasted with broken stone. The clearances in cuts are very small. The banks are much narrower than ordinary American practice would dictate, little or no margin or shoulder being left. Considerable masonry retaining wall work has been necessary. Openings for drainage are fewer than is usual in American practice, despite the heavy rainfall of the section. There are 147 tunnels on the line, the longest of which is 2,112 feet. Some of these have been faced, while others, through the solid rock, have not been. Some have had to be braced with steel inside the masonry facing. The clearances in the tunnels are very small. There are 47 bridges over 65 feet in length. There are many types of steel bridges and also bridges of cut-stone masonry. Considerable ingenuity has been displayed at several places in the mountains in the design of steel bridges. Guard rails are not laid in the track on bridges, despite the fact that many of the bridges are on curves.

The locomotives are of several types. With the exception of a few small switching locomotives, all are of French manufacture. The passenger coaches are all equipped with bogie trucks. They are of three general types—fourth-class cars, third-class cars, which are merely box cars with wooden cross seats built in, and coaches with three compartments, namely, one first class, with seats upholstered in imitation leather or cloth, one second class, and a third class with wooden seats built in. They are lighted with kerosene lamps.

There are a few box cars with bogie trucks, but most of the freight cars are of the four-wheel type. All of the equipment is necessarily light. Only part of the freight cars are equipped with power brakes, most of them being provided with hand brakes only. All cars are of French manufacture. The couplers are of the hook-and-screw lever type usual on the European Continent. They are light in construction, as the trains are not long or heavy. On account of the grades the maximum ability of a freight train is six freight cars of 10 metric tons capacity. As the usual carload is not more than 5 tons, the ordinary train carries, as a rule, something less than 30 tons.

For the purpose of fixing freight rates, merchandise is divided into five classes and the line into four sections. The various classes of goods pay, according to the section, from 4 cents to 26 cents Mex. per ton per kilometer (0.62137 mile). The highest charges are levied on the first class, among the most important articles included in this being cotton goods, dyestuffs, tobacco, matches, kerosene, tin, thread, and machinery. According to the latest reports available, the charges per ton on carload lots, with a minimum of 5 metric tons, are as follows: Haiphong-Mengtsz, $50.40 Mex.; Haiphong-Yunnanfu, $70.80 Mex. The rate for tin, the principal export from Yunnan, from Mengtsz to Haiphong is $40.40 Mex. per ton. French and Indo-Chinese goods enjoy a tariff preference of 20 per cent on an average. Consequently, the rates charged for the carriage of such goods amount to: Haiphong-Mengtsz, $40.40 Mex.; Haiphong-Yunnanfu, $61.31 Mex. The preference enjoyed by French goods is increased by the customs regulations of Indo-China. While the French goods are imported into and passed through Indo-China free of duty, other foreign goods are compelled to pay a specific import duty, which in many cases reaches 60 per cent ad valorem, and such goods passing through Indo-China (that is, imported and reexported) pay 20 per cent of the import duty.

During 1915 there were a number of breaks in the line as a result of washouts and landslides. Freight and passengers had to be unloaded and transported around these breaks. The weight of single packages was thus limited to 40 kilos or less. The cost of transporting this merchandise had to be paid by the shipper.

A railway is being built from Pichetchai via Mengtsz to the Kotchiu tin mines. The capital is Chinese and the engineer is French. The length of this projected line is between 25 and 30 miles.

PROSPECTIVE RAILWAYS.

There are a number of schemes for building railways in the Canton consular district which have not progressed beyond the formulative stage. This is largely because of the political disturbances that have agitated the country during the past few years. A return to normal conditions will no doubt enable the promoters of these projects to put their plans into effect.

The Canton-Amoy Railway is also known as the Waichow Railway. This line is proposed to start from Shektan, a station on the Canton-Kowloon Railway across the river from Sheklung, and to run in an easterly direction, passing through Paklo, Waichow, and Lukfung, and thence running in a northeasterly direction to Kityang and Chaochowfu, in the Swatow consular district. At the latter place it is to cross the Swatow-Chaochowfu Railway, and from there continue in a northeasterly direction to the Fukien border. The total length of the line is estimated at 275 miles. The proposed capital of the company is said to be $25,000,000 Canton currency ($12,500,000 United States currency), divided into 5,000,000 shares of $5 each. The principal promoter of the line was Chen Chiung-ming, who was the governor of Kwangtung Province in 1913. At the time of the so-called "second revolution" in 1913, Chen Chiung-ming declared the independence of Kwangtung, and for this act he was out of favor with the central Government and was forced to leave the country. Since that time nothing has been done with regard to the railway.

The country to be traversed by the line is very populous and fertile, and there are numerous cities, of from 10,000 to 400,000 people, along the route. The chief cities are Sheklung, population 100,000; Waichow, population 300,000; Kityang, population 300,000; and Chaochowfu, population 400,000.

The Canton-Macao Railway is to connect Canton with the Portuguese colony of Macao, a distance of 72 miles. In addition to the main line, it is proposed to build a branch line from Chunchuen to Kongmoon, a treaty port. This branch will be about 30 miles in length. The concession for the line is held by a Chinese company. It is expected that construction will be begun during 1919. The total cost of the main line has been estimated at $10,000,000 Hongkong currency ($5,000,000 United States currency). The country through which the railroad is to pass is low-lying and intersected by numberless creeks. It is given over to the cultivation of rice, fruit, and vegetables. There are no large cities along the proposed line of railway, but the country is thickly populated. Several towns of from 10,000 to 50,000 people are located along this route, among which may be mentioned Chentsun, Shuntak, Heungshan, Kamchek, and Kaokong.

ABSENCE OF TRAMWAYS.

There are no tramways in operation in the Canton consular district, although at one or two places light railways of the Decauville type are in use for carrying goods and passengers for a distance of a few miles only. The engines and equipment of these railways are usually of German manufacture. There is little prospect of tramways being introduced in the near future.

CHARACTER OF ROADS—METHODS OF TRANSPORTATION.

In Kwangtung the numerous waterways reaching every part of the Province serve as a network of lines for transportation purposes, and very few roads are necessary. Such roads as exist are, for the most part, merely pathways between rice fields, paved with slabs of stone. These paths are very narrow in most places, it being impossible for two people to walk abreast. Very little is done in the way of keeping up these roads.

In the cities the streets are extremely narrow, varying in width from 8 to 12 feet, and are paved with stone flags. There are no wheeled vehicles of any sort in use in the cities, and but very few are to be seen in the country districts. Ponies and water buffaloes are used to draw such few vehicles as are in use.

The most famous highway in the Province is that leading from Nanhsiungchow into Kiangsi Province. This road is paved, and all along at regular intervals are built sheds to afford shelter to the carriers, who number about 50,000. The boundary limit of the two Provinces is the Meikwan or Plum Tree barrier, situated at an elevation of 1,000 feet above sea level. .

In Kwangsi Province communication is also mostly by water, although the waterways are not nearly so numerous as those of Kwangtung. The chief port of Kwangsi is Wuchow, on the eastern border of the Province. The district served by this port comprises the greater part of the Province and also sections of Yunnan and Kweichow, the chief means of communication being the West River and its branches. The points that Wuchow supplies and that can not be reached by water are served by carrying coolies and pack animals along very ill-kept trade routes, dating from centuries ago.

Yunnan Province has very few navigable streams, and communication is mostly by pack animals and carriers. This Province may be divided into three fairly distinct trade districts: (1) The eastern district, including the prefectures of Chaotung, Tungchuan, Yunnan, Kutsing, Chengkiang, Kwangnan, Kaihwa, Tsuyung, and Linan; trade with this district is carried on from Tongking and Hongkong through the port of Mengtsz. (2) The southern district, including the prefecture of Puerh and trading largely with the British Shan States and the Haut Laus, but drawing on both Mengtsz and Tengyueh for a share of its imports. (3) The western district, including the prefectures of Shunning, Yungchang, Tali, and Likiang, which is supplied by Burma through the port of Tengyueh. A certain amount of intertrading and overlapping occurs, but for general purposes these divisions may be accepted as approximately accurate. Each of these districts has one treaty port or trade mart—Mengtsz in the east, Szemao in the south, and Tengyueh in the west.

Before the advent of the railway the only means of transportation consisted of pack trains of mules, ponies, and occasionally bullocks. Bullock carts were used where possible. The old trade route from Mengtsz to Tongking and the sea lay from Mengtsz overland to Manhao, about 40 miles distant, and then by the Red River to Hanoi. From November until May the river was not navigable, and during much of the remainder of the year its navigation was uncertain and dangerous. Wrecks were frequent and costly. Both above and below Hokow the overland section of the route was scarcely more satisfactory, involving, as it did, long delays and allowing breakages and thefts of cargo. The opening of the railway from Haiphong to Yunnanfu through Mengtsz has now changed all this and given eastern Yunnan a more satisfactory means of communication. Szemao and Tengyueh, however, are still dependent upon their primitive pack service. The city of Tengyueh is the distributing and collecting center in Yunnan for the trade with Burma and is connected with Bhamo by two caravan routes—the "old route" through Nantien, Kanghai, Lungchang, Manwyne, and Nampoung, and the "new route," constructed with the assistance of the Burma Government, via Kanghai, Lungchang, Manhsien, and Kulikha. The "new route" was opened in 1905 and is one stage shorter than the old. Both are dirt roads and during the rains that prevail between May and October are unserviceable. The suspension of traffic during the rainy season is due not only to the impassable roads, but also to the heavy, dank, and suffocating air that then fills the gorges through which the roads pass and brings disease to the muleteers and porters from the higher regions. The entire collecting and distributing trade between Tengyueh and Szemao and Mengtsz, except immediately along the line of railway, is still done by pack trains and porters over precipitous and inconceivably wretched mountain roads. In 1915 the number of mules and other pack animals engaged in this traffic at Mengtsz was 61,099, at Tengyueh 98,390, and at Szemao 15,547.

Numerous other roads radiate from Yunnanfu, the capital, the principal ones being the road to Kweichow, via Kuhchingfu; the road to Szechwan, via Tungchwanfu and Chowtungfu; and the road to Tibet, via Talifu and Atemtze. A road also leads from Yunnanfu into Kwangsi by way of Kwangnanfu.

The Province of Kweichow is very rough and mountainous, and communication is exceedingly difficult. The navigable streams do not penetrate this region sufficiently to serve as highways of communication. The capital of the Province is Kweiyang, and numerous roads radiate from there to all parts of the Province. The town is situated at an altitude of 3,300 feet and is built in the largest plain of Kweichow, 40 miles in length by 4 in breadth. Starting from the capital, roads lead to Chungking in Szechwan, to upper Yunnan, to Kwangsi, and to Hunan. Communication is by pack animals and carriers.

POSTAL FACILITIES.

The Chinese Government Post Office maintains an excellent service throughout this district. Mail is conveyed not only by railway and steamer but also to remote interior districts by launch and by a system of day-and-night courier service. The Province of Kwangtung, having the largest population, is better supplied with post offices than are the more sparsely populated Provinces of Kwangsi and Kweichow, there being at present 125 first, second, and third class offices in Kwangtung, located in almost every city and town of importance, as well as 7 suboffices and 882 postal agencies. The latter are in villages not large enough to warrant the establishment of a post office. Of the post offices about 100 are in the Canton consular district, the remaining 25 being in the Swatow district. About 80 per cent are money-order offices.

In Kwangsi Province there are 30 offices, 3 suboffices, and 232 agencies. Yunnan has 35 offices, 5 suboffices, and 162 agencies. Kweichow has 29 offices, 4 suboffices and 158 agencies.

The amount of mail matter dealt with in these four Provinces amounted in 1917 to more than 120,000,000 pieces.

Each Province constitutes a postal district, which is in charge of the postal commissioner. The head office of the Kwangtung district is Canton; that of Kwangsi, Nanning; that of Kweichow, Kweiyang; and that of Yunnan, Yunnanfu.

A parcel-post service is maintained between China and the United States through the Chinese Post Office. The rate is 35 cents Mex. per pound or fraction thereof. In addition, parcels posted at nonsteam-served offices in China pay additional domestic rates and, similarly, domestic postage will be collected from the addressees of parcels sent from the United States to nonsteam-served places in China. The registration fee is 10 cents Mex. extra. Parcels must not exceed 11 pounds in weight nor the following dimensions: Greatest length, 3 feet 6 inches; greatest length and girth combined, 6 feet. Parcels for or from nonsteam-served places may not exceed 1 cubic foot in volume. Parcels must not be sealed with wax, lead, or in any other manner but must be packed so that they can be easily opened for customs examination.

The Chinese postal tariff is as follows:

Letters.—For each 20 grams or fraction thereof: Local, 1 cent Mex. (½ cent in Canton); domestic, 3 cents Mex.; foreign, 10 cents Mex. for first 20 grams, 6 cents Mex. for each successive 20 grams.

Book post.—For each 50 grams: Foreign, 2 cents Mex.

Sample post.—For each 50 grams: Foreign, 2 cents Mex. up to 350 grams, limit of weight.

Express fee to foreign countries.—12 cents Mex. per article.

Domestic money-order rate.—2 per cent. No foreign money orders issued.

In addition to the Chinese post office, the following countries have post offices located in this district: Great Britain—At Canton and at Hoihow, Island of Hainan, Kwangtung Province. France—At Canton, Hoihow, Kwangchow, and Pakhoi, in Kwangtung Province, and Mengtsz and Yunnanfu, in Yunnan Province. Japan—At Canton.

The rate on first-class mail sent through foreign post offices is the same as through the Chinese Post Office. The parcel-post rate to the United States through the Japanese post office is 24 cents Mex. per pound or fraction thereof. The parcel-post rate through the

British post office is 35 cents Mex. per pound. The sample post rate through the British post office is 2 cents Mex. per 2 ounces; limit of weight 12 ounces. All post offices charge double rates for underpaid postage.

The Chinese post office does not maintain a money-order service with the United States or other foreign countries. The British post office will sell a money order on the United States, charging 1½ per cent for such order. The French and German post offices have no money-order facilities with the United States.

There are several lines of steamers carrying mail between Hongkong and the United States across the Pacific. Mails close at Canton one day earlier than the departure of the steamer from Hongkong. These departures vary according to the schedule of the steamers, but mails are usually sent about once a week. Also mails are received from the United States at about the same interval. The average time for first-class mail matter to reach Canton from New York is 30 to 35 days.

TELEGRAPHS.

The Chinese Government Telegraph Administration maintains 67 stations in Kwangtung, 51 in Kwangsi, 35 in Yunnan, and 11 in Kweichow. There are two telegraph lines connecting Canton with Shanghai overland. The first of these, opened in 1882, runs from Shanghai to Canton via Swatow and Foochow. The second, running overland by way of Kiukiang and Hankow, was completed two years later. Telegraph conventions have been entered into between China and the Governments of India and France, respecting connections at the Burma and Indo-China frontiers. The telegraph instruments used in the Chinese Telegraph Administration are the regular Morse instruments, purchased in Great Britain and Denmark. The wires and cables were purchased from the United States and Great Britain.

The rate on foreign messages sent to places within the same Province is 9 cents Mex. per word, the address and signature included. To stations in other Provinces the rate is 18 cents Mex. per word. Chinese messages are sent at 6 cents Mex. per word to stations in the same Province and 12 cents Mex. to other Provinces. Cables sent from points in the Canton consular district to the United States are sent to Hongkong and thence over the Eastern Extension, Australasia & China Telegraph Co. (Ltd.), a British line, to either Shanghai or Manila, and from there over the Commercial Pacific Cable via Guam, Midway, and Honolulu to San Francisco. Cables can also be sent from Hongkong to New York via Singapore, Bombay, Aden, Alexandria, Malta, Lisbon, and the Azores.

The rates from Canton to New York and Boston via the Pacific are $2.40 Mex. and via the Atlantic $3.25 Mex. per word. To San Francisco via the Pacific the rates are $2.15 Mex. and via the Atlantic $3.50 Mex. To European countries the rates are $1.75 Mex. per word. In all cases address and signature must be included in the number of words. The Chinese Telegraph Co. charges $12 Mex. per year for registering a telegraphic code address.

TELEPHONES.

The only telephone system installed in the Canton consular district, aside from the railway telephone lines and a few small private lines with only a few subscribers each, is the telephone system of

Canton. This is a government telephone under the control of the Kwangtung provincial government. The number of subscribers at the present time is 1,609, and the total mileage of single copper wire is 5,889. The service is at present far from satisfactory, as the equipment is rather antiquated. The exchange equipment in use is largely Japanese, manufactured by the Nippon Electric Co., of Tokyo, Japan. The telephones installed are of Norwegian, Swedish, and Japanese manufacture. The rate to subscribers is $6 local currency per month.

In December, 1912, a contract was entered into with the Hongkong representative of the Swedish firm of L. M. Ericsson, of Stockholm, for the purchase of a complete exchange equipment, at a cost of $287,000 Hongkong currency ($143,500 United States currency), including 1,200 wall telephone instruments. This exchange equipment was to have a capacity up to 10,000 telephones, and to accommodate it the Chinese Government erected a fine three-storied brick building on the Bund at a cost of approximately $60,000 Hongkong currency ($30,000 United States currency). This equipment was installed under the supervision of experts sent out from Sweden, the whole being completed some time during 1914.

The telephone company also purchased during 1915 39 miles of lead-covered telephone cable, from a Pittsburgh company; 39 miles of steel wire strand, from a New York company; and other miscellaneous telephone material from a Chicago company.

There has been considerable talk of establishing telephone exchanges in Fatshan, Kongmoon, Wuchow, and other cities in the interior, with a prospect of eventually linking up those cities with Canton, but nothing has been done as yet. It has also been proposed to establish telephone connections between Canton and Hongkong, but at the present time this is scarcely feasible.

NEWSPAPERS.

There are no newspapers printed in a foreign language in Canton. The Hongkong papers are circulated and are largely read by the foreign community. The four Hongkong daily papers, all printed in English, are the South China Morning Post, the Hongkong Telegraph, the China Mail, and the Hongkong Daily Press.

Of the Chinese newspapers, there are about 19 dailies printed in Canton, with a circulation varying from 1,000 to 5,000 each. The most important of these are the Kwangtung Seventy-Two Guilds, published at Tai Tsup Po, and the Yeung Shing Yet Po, published at Sup Pat Po. The advertising rates of these newspapers per 100 Chinese characters are as follows:

Period.	Space above leading article.	Front page.	Back page.
	Canton currency.	*Canton currency.*	*Canton currency.*
One week	$5.00	$4	$2
One month	14.40	12	6
Six months	50.00	40	20
One year	85.00	68	34

A discount of 5 per cent is allowed for advertisements exceeding 300 characters, and 20 per cent for those exceeding 500 characters. The above rates are for ordinary-size No. 4 characters, and an additional charge is made for larger type.

One quarter-page advertisement will cost $23 per month, $120 for six months, or $216 for the year.

The above prices are all given in Canton currency, $1 Canton currency being normally equal to about $0.50 United States currency.

In addition to the newspapers published in Canton, two Chinese newspapers are published in the Heungshan district and two in the Sunning district. Also, newspapers are published at Wuchow, in Kwangsi, and in Yunnan Province.

Among the Cantonese the percentage of persons able to read and write is considerably above the average in China, as the Cantonese are naturally quick and clever at learning. Among the inhabitants of the other Provinces the percentage is about the same as throughout China.

PUBLIC WORKS AND SANITATION.

GENERAL CONDITIONS—CONSERVANCY AND RECLAMATION PROJECTS.

Improvements in the way of public works, sanitation, etc., have been retarded by reason of the unsettled political conditions that have obtained throughout the district and the stringency of the money market. Much might be done for the betterment of the district by providing good roads, railways, sanitation, lighting, etc.

With a view to effecting modern improvements in Canton a municipal council was established by the local authorities during 1918. A scheme of improvement was drawn up that will take several years to complete. The work of demolishing the city walls is now proceeding. It is planned to provide three parks and to build six modern roads, work on the roads being now under way. The scheme of improvement contemplates a tramway and a motor-car service.

Nothing has been done in the district toward improving the system of irrigation, and happily the need for such improvements is not imperative. The district, for the most part, is well supplied by innumerable waterways and canals, and the rainfall is abundant.

Nor, until the recent floods throughout the district, had anything modern been undertaken in the way of conservancy and reclamation. Owing, however, to the extensive damage wrought by the floods in the destruction of lives, property, and crops, the Government has been obliged to take the initiative in preventing the recurrence of such a disaster. Repairs to dikes and embankments are being undertaken in many places, but as yet the damage done has by no means been adequately repaired, and it is thought by many that if heavy rains occur during succeeding years, floods similar to that of 1915 will be experienced. The Kwangtung Conservancy Board, under the direction of Mr. Tan Hsueh Hong, with Mr. G. W. Olivecrona as chief engineer, has completed a topographic and hydrographic survey of the West River. This survey includes the establishing of a continuous sequence of levels from Wuchow, Kwangsi, to the sea along the West River proper, together with the establishment of 120 bench marks. Current velocity measurement has been taken in eight sections between Wuchow and the sea. The quantities of silt carried in suspension at different water levels have been determined. Fourteen gauging stations have been established in the West River, North River, and Foo River for observing the rise and fall of the water level. Four gauging stations in Kwangsi have been established for the observation of rainfalls. The possibility of constructing an additional outlet to the sea for the West River system has been investigated. Investigations similar to those conducted on the West River will be undertaken on the North River and East River systems.

DIFFICULTIES IN THE WAY OF STREET IMPROVEMENTS.

Wretched as are the conditions obtaining throughout the district with respect to good roads, practically nothing has been done in the past to better them. City streets have remained as they have always been—narrow, ill-lighted lanes, paved with granite slabs irregularly laid, or in some instances not paved at all. Traffic can be carried on through these streets only on foot, the use of wheeled vehicles being out of the question. There are no roads in the country districts, and communication between the various towns inland is carried on either by water or over narrow paths leading through rice paddies and barely wide enough to accommodate one pedestrian.

In Canton and in the larger treaty ports of the district, a few improvements are being effected in the way of widening the streets. There is one road in Canton along the river front, extending for a distance of 15,000 feet, that is well paved and sufficiently wide to permit of wheeled traffic. The cost of its construction and maintenance has been met by the local government. The government also proposed to widen the street opposite the foreign concession at Canton for a distance of a little more than 5,000 feet. A few miles of road have also been built to the northeast of Canton in the vicinity of White Cloud Mountain. The obstacles in the way of any substantial improvement of the streets, not only of Canton but of every city throughout the district, are almost unsurmountable. To effect any radical alterations would necessitate the tearing down of practically all existing structures and an adjustment of property rights innumerable.

ELECTRIC POWER PLANTS.

In 1906 the Kwangtung Electric Supply Co. was established at Canton. It is a limited stock company, one-third of the stock being vested in the provincial government and the remainder in the public. The original investment amounted to approximately $480,000 United States currency. The staff of the company consists of the managing director, assistant general manager, secretary-treasurer, engineer in chief, chief assistant engineer, and the directorate. These officers are elected by the stockholders, the government having little if any voice in their selection. The Canton plant was started with four 120-kilowatt vertical high-speed compound condensing steam sets. As the installation of those sets did not pay, a Diesel program was adopted, and during a period of nine years six machines of 200 horsepower, one of 300, and two of 500, making a total of 2,500 horsepower, were set up. The power company has now engaged an American engineer to design a steam-turbine station. Work on the first installation was progressing during the early part of 1919 and was expected to be completed in about 13 months. The machinery is of American manufacture throughout, and the plant will be up to date in every way. The main machinery of the first installation will consist of two 2,500-kilowatt turbo-alternators (2,200-volt, three-phase, 60-cycle), four 750-horsepower boilers, stokers, and condensers. The switchboard, electrically controlled, will be supplied by a well-known American company. The station will ultimately include two 5,000-kilowatt and two 10,000-kilowatt steam turbines. The Canton station will be the only strictly modern power plant in South China owned and controlled by Chinese capital. The future of this concern looks very bright from the standpoint of electric lighting. The building up of any great power load will depend largely upon the development of additional industries in Canton. The rate at which current can be profitably sold depends upon the development of the coal fields in Kwangtung Province. With the development of those fields numerous industries should spring up in Canton, and a lower price per unit would naturally mean an increased business.

In addition to Canton, electric power plants have been installed in many other cities and towns, particularly in the Canton delta, among which may be mentioned those at the following places: Kongmoon, a treaty port in the Canton delta (cost of installation, $18,768 United States currency); Sainam, Kwangtung Province, near the treaty port of Samshui (cost of installation, $8,993 United States currency); Tailong, Kwangtung Province (cost of installation, $3,910 United States currency); Sheklung, a station on the Canton-Kowloon Railway (cost of installation, $3,128 United States currency); Chanchuen, Kwangtung Province (cost of installation, $3,128 United States currency); Sunning City, Kwangtung Province (cost of installation, $13,000 United States currency); Sunchong, Kwangtung Province; Fatshan, Kwangtung Province; Shiuhing, Kwangtung Province; Kiungchow, Island of Hainan, Kwangtung Province; Nanning, Kwangsi Province; Wuchow, Kwangsi Province; Mengtsz, Yunnan Province.

The electrical equipment of these installations was purchased for the most part in the United States, while the engines came from England. The equipment for the plant at Sunning City was manufactured in Sweden.

The plants at Fatshan, Sainam, Shiuhing, Nanning, and Wuchow are owned and controlled by the government, the others by private companies.

WATER SUPPLY.

The Canton Waterworks Co. was founded in 1904–05, with a capital tal of $2,250,000 Canton currency, divided into 150,000 shares of $15 each. One-half of the shares was at first owned by the government and the other half by individual subscribers. From time to time, however, the latter have been purchasing more and more of the shares owned by the government until at the present time only 18,754 shares belong to the government, as compared with 131,246 shares owned by the public.

The supply was designed to serve 400,000 people, or 40,000 families of 10 persons each. At the present time it serves a population of a little over 200,000. The increase in the number of people served by the supply is about 1,500 monthly. The intake is from the river, 4 miles distant from the city. The output of water is 537,600 gallons per day.

The equipment comprises a purification plant, costing upward of $22,400 United States currency, and three pumping engines, costing $9,600 United States currency, each. Both the plant and the engines were purchased in Japan, and the former has been highly praised by Europeans who have visited the place.

The minimum charge for water to every consumer is $1.50 Mex. per month, and an additional charge of 15 cents Mex. is made for every person in excess of the number of six.

SEWERAGE.

In Canton there are but four streets provided with sewers, the total length of the latter being 3,000 feet. The cost of constructing the system was $11 Canton currency per foot, which was defrayed by the government from appropriations from the current revenues. It is impossible to estimate the actual population served, but it is only a small fraction of the population of the city.

In the interior towns of the district there are no sewerage systems in operation, except in so far as the numerous canals may be said to provide such a system.

FIRE PROTECTION.

In spite of annual losses from fire aggregating millions of dollars, the Chinese throughout the district have taken practically no steps to minimize these losses. Modern fire-fighting apparatus is unknown even in the larger cities, where the people depend for the most part on the old-fashioned bucket or barrel of water stowed away in some convenient part of the building.

No modern fire engines are in use at Canton, nor does the city maintain an up-to-date fire department. In case of an outbreak of fire, the only recourse is to hand pumps, with hose, distributed throughout the city. These pumps are moved with difficulty through the narrow streets and are often unable to project a stream of water to the tops of the highest buildings. Under these circumstances, it is not surprising that whole sections of the city are destroyed on the occasion of an outbreak of fire.

TREATY PORTS AND FOREIGN CONCESSIONS.

KWANGTUNG PROVINCE.

Canton.—The principal treaty port in South China is Canton, which is the capital of Kwangtung Province, situated about 95 miles by river and 112 miles by rail from Hongkong. It has a population variously estimated at from 900,000 to 1,500,000. The foreign concessions are situated on an island in the Pearl River, which was filled in and reclaimed by the British and French in 1859. On this island are located the consulates, banks, and foreign "hongs." The island is divided into the British and French concessions. Consulates general and consulates representing the United States, Great Britain, France, Germany, Russia, Japan, Portugal, Italy, the Netherlands, Norway, and Sweden are located on the island.

Canton was at an early date the great port in China for European commerce, and up to 60 years ago it enjoyed a monopoly of the commerce with foreign countries. The Arabs first came to Canton in the tenth century, the Portuguese in 1515, and later the Dutch and English. The British East India Co. established a factory or warehouse in Canton in 1684, and from that time until 1834 the company enjoyed a monopoly of the British trade with China. Since the cession of Hongkong to the British in 1842 and the opening up of the treaty ports in North and Central China, the importance of Canton as a center of foreign trade has declined, but it is still one of the richest and most populous cities in China and the political and commercial metropolis of the south.

Canton is easily reached from Hongkong. A daily steamboat service is maintained and, in addition, a railway runs between Canton and Kowloon, which is situated on the mainland opposite the island of Hongkong, the journey occupying about 3½ hours. Canton, as already mentioned, is the southern terminus of the Canton-Hankow Railway, which is, at the present time, running as far as Hsiukwan in the northern part of Kwangtung Province. When this railway is completed, it will undoubtedly increase the importance of Canton as a commercial center. Canton is also the terminus of a short railway running to Samshui, the junction of the West and North Rivers, about 30 miles distant from the capital.

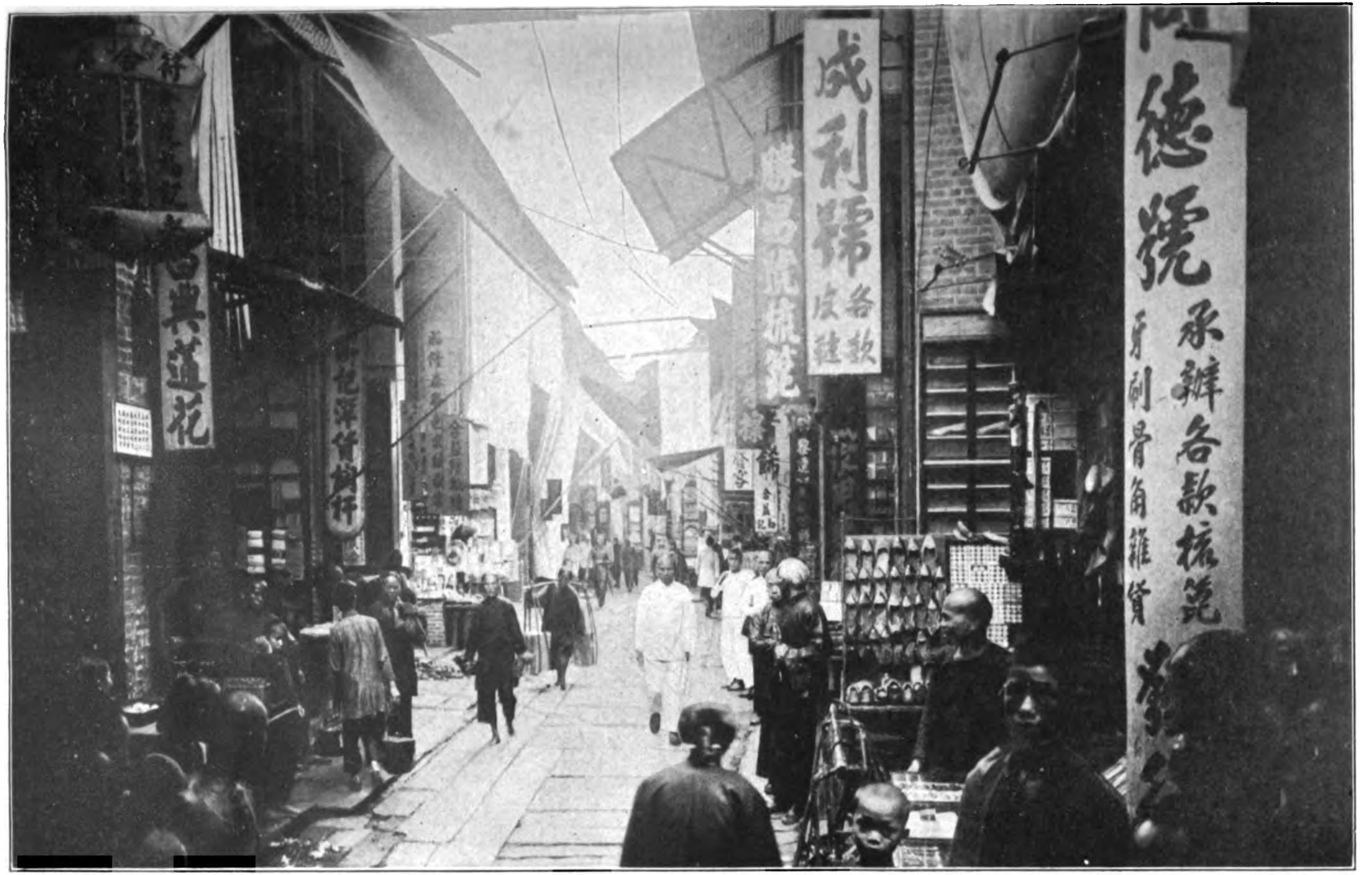
Canton has a number of up-to-date stores. With the recent formal opening of the Sun Co.'s 9-story building, modern in every respect, and the coming construction of the Wing On Building, the city will have four large department stores, the other two being those of the Sincere Co. and Chen Kwong & Co. The latter is the oldest of the four stores, having opened about 10 years ago.

Samshui.—A small port at the junction of the West and North Rivers. Population about 6,000. No foreign consulates or foreign mercantile establishments are located here. The place derives its importance from the large junk traffic up the West and North Rivers.

Kongmoon.—A city of considerable importance, located in the Sunwui district on a creek that runs into the West River. Population 60,000. It is distant about 70 miles from Canton and 85 from Hongkong, from which latter place it can be reached by steamer. No foreign consulates are located here.

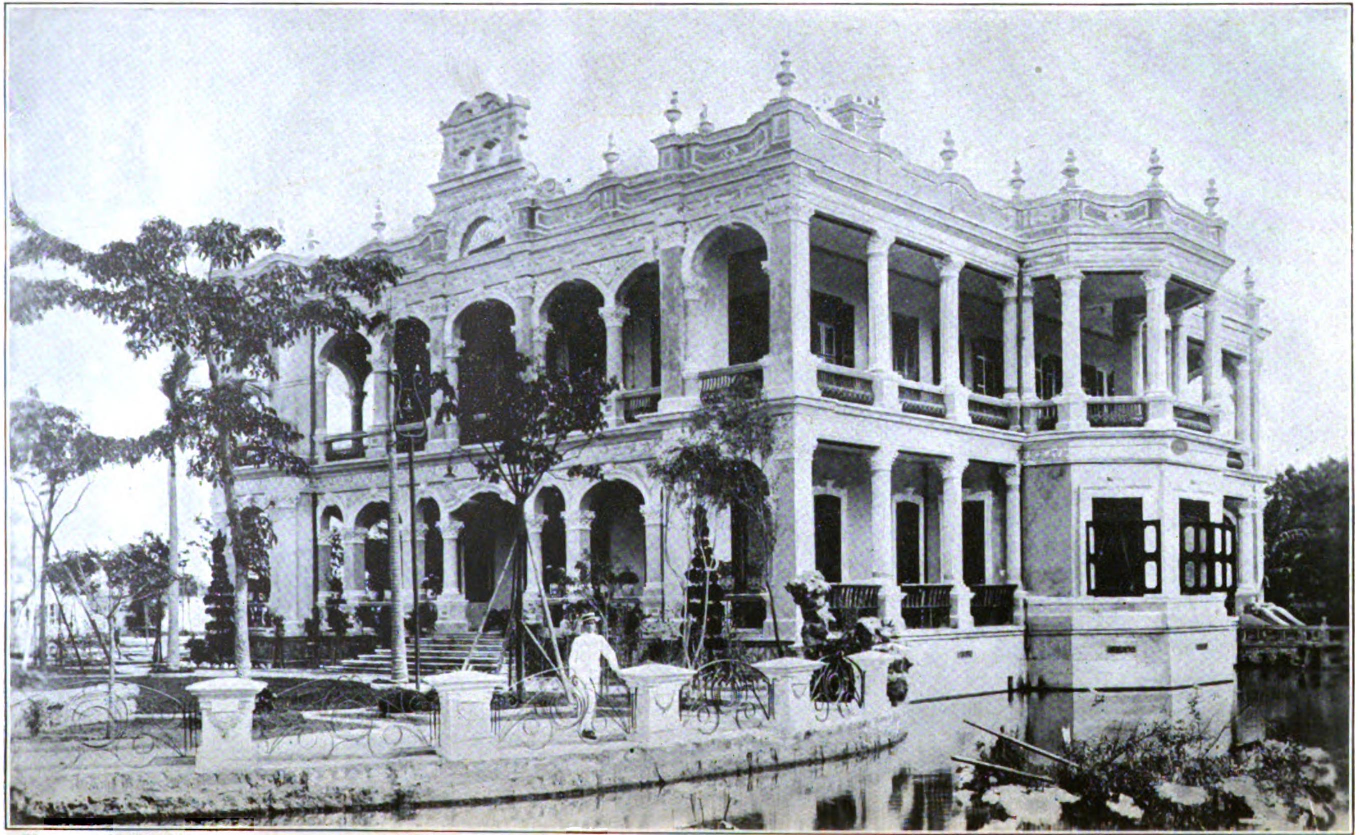
Pakhoi.—Situated in the southern part of the Province, in the Linchow District. British, French, and German consulates are located here. Population 20,000. Pakhoi was formerly a distributing center for large districts in Kwangtung, Kwangsi, and Yunnan Provinces. It reached its greatest prosperity in 1888, since which time it has declined considerably as a trading center, the reasons being the proximity of Haiphong and the opening of treaty ports on the West River in Kwangsi Province. The harbor is good and easily approached, entrance being effected through a large and deep channel, which ships have no difficulty in crossing at high water.

Hoihow, Island of Hainan.—Population 20,000. This port is situated in the northwestern part of the island of Hainan. The water in the bay is shallow, the tides are very variable, and typhoons are considerably to be feared. Its trade, however, is considerable, the principal exports being straw mats, cattle, pigs, poultry, hemp, medicines, brown sugar, and fresh eggs. The imports are cotton and woolen goods, kerosene oil, rice, beans and peas, flour, aniline dyes, and matches. Communication is chiefly with Hongkong, Pakhoi, and Swatow.



Photograph by E. M. Newman.

FIG. 4.—STREET SCENE IN CANTON.



Photograph by E. M. Newman.

FIG. 5.—RESIDENCE OF WEALTHY CHINESE, MACAO.

KWANGSI PROVINCE.

Wuchow.—Situated in the eastern part of Kwangsi Province, 220 miles from Hongkong, at the junction of the West and the Fu or Kwei Rivers. Wuchow has a population of about 60,000, and is the chief port of Kwangsi Province. Steamers reach Wuchow from Canton and Hongkong in about 2½ days. A British consulate is located here.

Nanning.—Population 40,000. Situated on the left bank of the Tso-kiang, a branch of the West River, 368 miles above Wuchow. Nanning is at present the capital of the Province of Kwangsi.

Lungchow.—Situated in the southwestern part of the Province, near the border of Tongking. Population 22,000. The bulk of the trade passing through Lungchow is from Tongking. No foreign merchants are located here. The French Government maintains a vice consulate at Lungchow.

YUNNAN PROVINCE.

Mengtsz.—In Linnganfu. Population 11,000. Is the chief port of Yunnan Province. The total trade of the port amounted in 1918 to 20,873,043 taels, or $24,901,540 United States currency. A French consulate is located here.

Hokow.—In Kaihuafu, directly opposite Laokai, in Tongking. A French vice consulate is maintained here.

Szemao-ting.—In Puerhfu, in the western part of Yunnan. Population 15,000. No foreign merchants are living here.

Tengyueh, or Momein.—In Yungchangfu. Population 10,000. No foreign merchants are living here. British consulates are located at Tengyueh and Szemao, largely on account of their proximity to the Burma frontier.

There are no treaty ports in Kweichow Province.

FINANCE AND BANKING.

The unit of currency in all transactions between foreigners in Canton is the Hongkong dollar. The unit of currency among the Chinese is Canton subsidiary coin, which varies between $105 and $125 subsidiary coin to $100 Hongkong notes, depending largely upon the course of trade. When imports are large, for which the Chinese dealer must pay in Hongkong notes, the tendency is to raise the price of the Hongkong dollar in terms of subsidiary coin. When few imports are coming in, the reverse is the case. Bank of China notes were also used in commercial transactions up to the summer of 1916, when the bank was forced to close its doors.

There is no exchange market in Canton, this being located in Hongkong. Therefore, the merchant, when selling or buying a bill of exchange, is not in a position to command quite so good a rate as in a larger settlement where the services of exchange brokers can be had.

The foreign banks usually pay interest on current accounts of 2 per cent per annum on balances of $500 and over, while on savings accounts and time deposits interest rates vary usually from 3½ to 5 per cent. The foreign banks usually charge 6 and 7 per cent on loans. The foreign banks located in Canton are the International

Banking Corporation, the Hongkong & Shanghai Banking Corporation, the Chartered Bank of India, Australia, and China, the Banque Industrielle de Chine,[1] the Bank of Taiwan, and the Banque de l'Indo-Chine. There is also an agency of the Banque de l'Indo-Chine established in Mengtsz, Province of Yunnan. All of these banks transact a general banking business, particularly in foreign exchange. The Asia Banking Corporation has announced its intention of opening a branch at Canton in October, 1919.

The three best-known Chinese banks in Canton are the Bank of China, the Bank of Communications, and the Bank of Canton, the two former being Government institutions and the latter a foreign-exchange bank conducted on modern lines, with head office in Hongkong and a branch also in San Francisco.

In addition, there are numbers of Chinese banks whose business is done entirely with the interior. These banks buy and sell small coin, make advances to the Chinese, and do a considerable exchange business with their correspondents located at various towns and cities in the interior of this and adjoining Provinces. These banks do not pay interest on current accounts, but on time deposits their rates of interest are about 6 per cent per annum. The rates of interest charged by the Chinese banks on short-term loans, etc., vary greatly but as a rule are about 10 per cent.

MANUFACTURING AND OTHER INDUSTRIES.

The development of manufacturing establishments along modern lines has not been very rapid in the Canton consular district. Although there are a number of plants equipped with modern machinery and turning out products in considerable amounts, the development along these lines has not been so great as in other parts of China. All the industrial concerns in this consular district are under native control and management, unless an exception is to be made in the case of the can-manufacturing establishments maintained by the different oil companies for making kerosene tins for their own products only. The largest industrial establishments in this district are owned and controlled by the Chinese Government.

KWANGTUNG GOVERNMENT CEMENT WORKS.

The Kwangtung Government cement works is one of the largest industrial concerns in Canton. It is located on the Honam side of the Pearl River and is the property of the Chinese Government. The whole represents an investment of about 2,000,000 taels. There is a cement-making plant and also a brick factory. The machinery in the cement plant is of German manufacture, purchased from Friedrich Krupp, of Magdeburg, Germany. Attached to the cement works there is a shop for the manufacture of casks. The wood for this purpose is brought from Wuchow and vicinity and made into casks at the works at a cost of approximately 60 cents Mexican each. During 1915 the cement plant produced about 145,000 casks (400 pounds to the cask), of which several thousand casks were exported to foreign countries, the remainder of the output being divided between Hongkong and Canton. The limestone used in the manufacture of the cement is brought to Canton in native junks from the quarries along the North River in the vicinity of Yingtak. The brick works, which are located on the same ground as the cement works, are also equipped with machinery of German make. The works have an output of 2,000 bricks per hour. In addition, various kinds of decorated and undecorated tiles are turned out. The clay, which is of good quality, is brought from the vicinity of Whampoa, 12 miles from Canton.

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[1] The Banque Industrielle de Chine is capitalized at 75,000,000 francs, of which one-third was subscribed by the Chinese Government.

A small electric-light plant has been installed in connection with the works.

The plant was opened in 1909.

YUE YICK SAND-LIME BRICK FACTORY.

The Yue Yick sand-lime brick factory is located at Mutmesha, a village about midway between Canton and Fatshan.

It is owned by a private Chinese company. The machinery and apparatus are entirely of German make and consist of crushers, mixers, four ordinary pressing machines and one rotating presser for fancy bricks, and four drying ovens. The pressing machines are worked during the day, at the close of which the bricks that have been turned out are piled on cars to be put into the ovens to dry during the night. The drying process takes 12 hours and is effected by a steam pressure of 130 pounds. A small electric-light plant has been installed to supply whatever electric light and power are required at the factory.

CANTON PAPER FACTORY.

The Canton paper factory is situated at Three-Eye Bridge, on the railway line running between Canton and Fatshan. The machinery is of English make, purchased from the firm of James Bertran & Son, of Edinburgh, Scotland. It has only a limited capacity, and, besides supplying the Government departments with paper, it sells only a small stock for local consumption. This plant was formerly owned by the Chinese Government but has recently been put under private management. There is also a paper mill located at the treaty port of Kongmoon.

KWANGTUNG GOVERNMENT MINT.

The Kwangtung Government mint is located in the eastern suburbs of Canton and is equipped with modern machinery. The mint during 1915 produced 2,743,633 silver dollars, 22,332,000 20-cent silver pieces, 688,000 10-cent silver pieces, and 6,350,000 1-cent copper pieces.

KWANGTUNG GOVERNMENT ARSENAL AND POWDER FACTORY.

The Kwangtung Government arsenal and powder factory is located at Shekching, about 5 miles from Canton, and is equipped with up-to-date machinery of German manufacture. Recently, however, some orders have been placed in the United States for milling machinery, planers, shapers, grinding machines, and grinding materials. The output of the factory consists of automatic revolvers and rifles of German pattern, bayonets, quick-firing guns capable of shooting 40 shots per minute, cartridges, and powder, both black and smokeless. The material for the manufacture of cartridges—principally copper—is purchased in Japan. At the time this report was written the arsenal was in need of the following equipment: Rough forgings for rifles, rifle barrels of twisted steel (recent purchases consisted of ordinary forged steel barrels in the rough, which had to be bored), rifle boring lathes, milling machines, shapers, hammers, sawing machines for sawing steel, and wooden butts. The latter are at present obtained in the north of China, walnut wood being used.

KWANGTUNG GOVERNMENT TANNERY.

The Kwangtung Government tannery was an institution started primarily for supplying leather for the Chinese troops. A considerable amount of machinery was purchased and the plant commenced operations, but for several years it has been abandoned.

OTHER ESTABLISHMENTS.

Among the other Canton manufacturing establishments is the Canton ice factory for making artificial ice. The machinery for this plant was purchased in Japan.

There are also several match factories located in Fatshan and Canton. These manufacture only the so-called "safety matches," which are put up in small boxes 2¼ by 1½ by ¾ inches. The larger match that is called in America the "parlor match" is unknown in this district. Match-making materials and materials for the boxes are imported for the most part from Japan.

There are also several soap factories making bar soap. The products of these factories are for local consumption, and practically none of them are exported abroad.

The Kwang Nam Dock Co. has reclaimed land and established a shipbuilding yard near Macao fort. Ships up to 3,000 tons can be built. More than 1,000 workmen are already employed.

The oil-engine business has been making rapid progress and promises to become an important factor in the industries of Kwangtung. During recent years numerous flat-bottom launches and native craft, specially built for operation in the shallow rivers of Kwangsi Province and in the Canton Delta, have been constructed and fitted with oil engines which have given satisfactory results.

From a reliable source it is learned that the firm of Hip Tung Wo, capitalized at $120,000 local currency, employs more than 100 workmen, under the supervision of native engineers, in the construction of these oil engines. Certain materials for the manufacture of shafts, such as huge lathes, etc., which can not be made locally, are purchased either in the United States (as evidenced by orders placed with foreign commission houses in Canton) or in Japan. In consequence of this the natives are at present able to manufacture shafts only 4 or 5 inches in diameter. Larger shafts, if needed, are made in the Hongkong & Whampoa Dock, Hongkong, or ordered in America.

The formation of a Chinese-American silk company, with a capital of $1,000,000, is announced. The concern will have offices in Seattle, Wash., and it is intended to import Chinese silk piece goods from Canton. It proposes to build a factory at Honam, an island opposite Canton, for the weaving of fine grades of plain and fancy silks.

CRUDE NATIVE INDUSTRIES.

The weaving of matting and mats is one of the chief industries in the districts of Tungkun and Lintan, as well as in other parts of Kwangtung. In addition to the matting exported, a vast amount of matting is used by the Chinese. Among the uses to which it is put locally may be mentioned wrappings and coverings for various kinds of goods, awnings, sails, etc. A very tall grass (*Arundo mitis*) is used in the weaving of matting exported abroad, but the people use other grasses for weaving and coarser kinds of matting. The matting loom used about Canton is an upright framework, with a cylinder above and below over which the warp of hempen thread runs. The woof is plaited in. Each weaver has an assistant who, as the weaver opens the warp, puts in the straw. The selvage is all turned in by hand and is made in the shape of a figure 8, over two warps, thus insuring against any possible loosening through wear and tear.

The manufacture of incense sticks, often known as "punk" in the United States, is quite an extensive industry. The materials used in the manufacture are sandalwood, various kinds of Chinese wood, sugar, Chinese wine, cloves, etc. The various kinds of wood are reduced by hand to a dust. The sugar and other ingredients used are ground to a fine powder in millstones. The materials are then mixed in an urn, the Chinese wine being used to moisten them, and are thoroughly kneaded. The whole substance is then rolled onto small bamboo sticks. Many kinds of incense sticks are manufactured, the best grades being made of bamboo sticks and varying in size. Some are as long as 3 feet, while the shortest are about 1 foot. Others are made in the shape of spirals. When lighted they give off a very aromatic odor and are used in vast quantities in Chinese religious observances.

The manufacture of firecrackers is a household industry employing large numbers of people, chiefly women and girls. The firecrackers are made of gunpowder rolled up in coarse paper. Fuses are inserted and the crackers are plaited together and made into packages.

There are a number of steam rice mills in Canton for the polishing of rice, and also for the grinding of rice flour.

There are some machine and blacksmith shops located on Honam Island and other places in Canton. These shops turn out marine engines and various other kinds of products in iron and steel. The workmen are considered to be very clever in copying any machine (if it is not too complicated) of which they may be given a model.

Other native industries of Canton that give employment to large numbers of people in the aggregate are: The weaving of cotton and silk cloth by hand looms; the manufacture of brass, pearl, and bone buttons; the decorating of chinaware, which has been shipped in its plain state to Canton from other parts of China; the making of palm-leaf fans, blackwood furniture, glass bangles or imitation jade (these are used as bracelets by Chinese women and are also exported in large quantities to India, where they are used for the same purpose); the weaving and embroidering of grass cloth and silk; the carving of ivory and jade; the making of Chinese wine, or samshu, which is made chiefly from rice (Lungshan and Fatshan are the chief centers of this industry); the coring of rattan and the making of various kinds of rattan ware; the making of a Chinese sauce called "soy," which is made from a certain bean which has been boiled slowly and to which wheat or barley flour is added (soy is exported for the use of Chinese living abroad and also for the making of certain foreign sauces and condiments); and the making of an infinite number of articles from bamboo, this last being a considerable industry. The manufacture of bamboo articles is carried on at various places, but the center is in Sunwui district of Kwangtung Province.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Canton during the years 1904, 1913, and 1917[a]:

Imports and exports.	1904	1913	1917
Imports of foreign goods:			
From foreign countries and Hongkong	$17,136,674	$22,889,678	$30,104,352
From Chinese ports	68,249	127,056	324,251
Total foreign imports	17,204,923	23,016,734	30,428,603
Reexports of foreign goods:			
To foreign countries and Hongkong	34,039	133,525	427,102
To Chinese ports	37,865	369,938	508,590
Total foreign reexports	71,904	503,463	935,692
Net total foreign imports	17,133,019	22,513,271	29,292,911
Imports of Chinese products	18,103,123	15,239,759	22,722,632
Reexports of Chinese products:			
To foreign countries and Hongkong	317,636	687,792	99,041
To Chinese ports	13,986	94,766	884,015
Total Chinese reexports	331,622	782,558	983,056
Net total Chinese imports	17,771,501	14,457,201	21,739,576
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	25,878,047	39,587,454	53,894,550
To Chinese ports	2,740,503	4,287,913	5,945,499
Total exports of local origin	28,618,550	43,875,367	59,840,049
Gross value of the trade of the port	63,926,596	82,131,860	112,991,284
Net value of the trade of the port	63,523,070	80,845,839	111,072,536

EXPORT TRADE.

The export trade of Canton has showed a healthy growth. In 1904 the total value of exports was $28,950,000, United States currency, while in 1910 it had risen to $38,768,000 and in 1913 to $44,658,000. In 1915 it dropped back to $29,612,000, or only a little more than in 1904; but in 1917 it had increased to $60,823,000.

Raw silk forms the most valuable article of export from Canton. During the past 10 years exports of this article have remained about the same, amounting to 4,500,000 to 5,000,000 pounds per annum. A bale of silk weighs 80 catties, or 106⅔ pounds, and consists of 10 bundles or "books" of silk weighing 8 catties each. Each "book" contains a certain number of skeins, depending on the size of the thread. The silk season starts at the beginning of May, when the first crop of cocoons is ready for the market. Six crops of silk are produced during the year, the last crop coming on in October or November. There are a number of qualities, ranging from "Superior A" to "Extra Extra B." The principal markets are New York,

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[a] EDITOR'S NOTE.—The year 1917 is the latest for which it is possible to obtain this summary of values. In the sections on "Export trade" and "Import trade," however, the reader will find 1918 figures.

Lyon, and London. Most of the silk firms doing business in Canton are of French or British nationality and make a specialty of that commodity.

In former years tea was one of the leading articles of export, but it has declined considerably in recent years owing to the fact that growers could not be brought to understand that a better quality of leaf was desirable. The adulteration of tea with sand and iron filings was in former years a practice by no means uncommon, and this led to rejections at home and consequent decline of the business. Nevertheless, about 3,300,000 pounds were exported in 1915. In 1917 the amount was 1,990,000 pounds.

The exports of matting have been subject to considerable changes during the past decade. In 1904 there were exported 389,000 rolls; in 1910, 315,792 rolls; in 1913, 157,259 rolls; in 1915, 66,200 rolls; in 1917, 44,146 rolls; and in 1918, 21,542 rolls. This decrease has resulted from a variety of causes, the chief of which are the decline in the quality of the matting straw, a decrease in the popularity of Chinese mattings in the United States, and, latterly, the cutting off of the German and Austrian markets and the enormous increase in freight rates. The chief producing centers are the districts of Lintan and Tungkun, in Kwangtung Province. Quantities of matting from Cochin-China are also bought by Canton dealers and exported abroad. The standard matting is known as the Lintan 116 warp. One roll of matting contains 40 square yards.

Exports of firecrackers and other fireworks have also fluctuated considerably in the past, depending of course on the demand at home, the local supply of saltpetre, etc. In 1904 there were exported about 4,200,000 pounds; in 1910, 10,367,000 pounds; in 1915, 5,643,000 pounds; in 1917, 4,943,000 pounds; and in 1918, 4,161,000 pounds. Firecrackers are packed as follows: They are divided according to count, such as 40/64, 100/24, etc. A 40/64 means 40 small packs to a paper box, each pack containing 64 crackers. Similarly 100/24 means 100 small packs to a paper box, each pack containing 24 crackers. After this 8 paper boxes are packed in a wooden box, which is matted and referred to as a "mat." Although the number is usually 8, it should be added that 4, 6, or 12 paper boxes may be packed in a mat. Shipments are made to the United States, Great Britain, and the Continent of Europe. The source of the supply of saltpetre for the manufacture of firecrackers has, for some time, been India, and the placing of an embargo on this commodity by the British Government has tended to increase materially the price of firecrackers.

The exports of cassia buds, twigs, lignea, and refuse ordinarily amount to 14,000,000 to 20,000,000 pounds per year. Cassia is packed in both bales and cases, each weighing ½ picul (66⅔ pounds).

The export trade of the Canton consular district—except for the Province of Yunnan, which trades mostly with Tongking and Burma, and part of the Province of Kweichow, whose trade is with Szechwan and the Yangtze—all flows eastward and finds its outlet at Hongkong or Canton. The foreign exporting houses of the district are located in either one or both of these two cities. Practically all of the firms in Hongkong doing an export business in China produce have a branch in Canton. The various Chinese products, such as mattings, cassia, firecrackers, fans, bristles, human hair, etc., are brought from the interior points by the Chinese dealer and sold to the foreign exporter, either f. o. b. Canton or c. i. f. Hongkong. If goods are sold by the Chinese dealer to the exporter f. o. b. Canton, the former pays the cost of transportation from the interior, the inland likin charges, and the export duty. If the goods are sold c. i. f. Hongkong, the dealer pays in addition the river freight and transshipping charges. One of the disadvantages under which exporters in Canton work is the fact that the freight and the exchange markets are located in Hongkong. Exporters in Canton are compelled to look to Hongkong for information regarding any changes that may occur in freight rates. This has been an important item during the years just passed, when freight rates have been subject to sudden alterations.

The following table gives the quantities and values of the principal exports (including reexports) from Canton during the years 1904, 1913, and 1918:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Bags, gunny..........number..	1,845,048	$75,220	1,493,871	$70,029	2,223,660	$204,874
Bristles...............pounds..	650,533	84,827	121,666	25,596	697,600	557,945
Canes.................number..	740,257	8,561	1,173,012	14,131	(a)	(a)
Cantharides...........pounds..	21,066	5,191	6,266	1,349	23,867	15,571
Cassia buds, lignea, refuse, twigs...........do....	14,587,733	789,703	22,228,666	1,297,441	20,404,667	855,307
Chinaware:						
Coarse...............do....	916,800	47,254	2,081,333	153,195	1,267,867	205,217
Fine.................do....	361,733	54,991	405,466	81,580	129,333	50,866
Fans, palm leaf:						
Decorated........number..	115,236	3,060	326,428	7,479	....	36,168
Trimmed............do....	6,590,800	105,731	4,103,528	51,823		
Untrimmed..........do....	4,911,790	19,934	2,833,060	14,891		
Feathers:						
Bird.................do....	3,532,392	23,555	2,901,960	9,536	(a)	(a)
Duck, fowl, etc...pounds..	384,533	17,546	42,266	5,345	1,156,933	88,756
Firecrackers and fireworks..................do....	4,200,666	469,452	8,638,000	1,110,345	4,161,067	1,224,904
Glass bangles............do....	1,558,933	149,588	913,200	105,137	....	158,561
Hair, human.............do....	287,066	49,631	1,590,933	356,662	441,733	139,843
Matting...................rolls..	389,330	•1,798,704	157,259	878,637	21,542	215,877
Medicines.............pounds..	3,568,533	125,595	4,157,733	182,395	4,491,467	365,992
Paper, first quality.......do....	2,299,200	223,733	621,466	68,308	b 2,205,867	b 257,649
Rattans, split............do....	126,266	5,232	17,466	909	(a)	(a)
Silk:						
Raw, white, not rereeled and not steam filature......do....	388,666	945,444	211,600	554,871	184,933	1,052,818
Raw, white, steam filature...............do....	4,602,800	12,631,072	6,057,200	20,094,785	4,460,933	31,482,348
Cocoons, whole.......do....	314,533	168,877	824,533	239,139	419,333	441,304
Cocoons, pierced.....do....	147,333	36,416	275,066	97,851	347,733	229,258
Refuse or waste......do....	3,508,933	969,131	5,284,000	1,979,193	5,730,800	3,663,222
Piece goods...........do....	1,056,666	3,773,777	1,240,266	6,102,902	1,090,933	8,681,648
Tea, black...............do....	3,362,000	380,072	1,836,666	319,368	2,003,067	571,546
All other articles..............	....	5,987,875	....	10,835,028	....	(a)
Total.....................	....	28,950,172	....	44,657,925	....	(a)

a Figures for 1918 are not available.

b These figures are for all kinds of paper.

The following table shows, by quantity and value, the articles declared at the Canton consulate general for exportation to the United States during the calendar years 1917 and 1918:

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
Antique pictures....cases..	7	$2,592		
Bristles....pounds..	27,467	31,096	63,975	$149,885
Chemicals and drugs:				
Blistering flies....		502		
Galangal....		100		
Copper ware, enamel....cases..	3	189	3	457
Earthen, stone, and china ware:				
Chinaware....do..	934	24,485	426	8,734
Curios....do..	9	1,393	1	111
Explosives: Firecrackers....pounds..	2,599,281	330,739	144,864	16,418
Fans:				
Palm-leaf....dozen..	174,094	39,332	111,916	13,793
Feather....cases..	1	159		
Feathers....pounds..	117,442	34,471	657,867	62,154
Fiber, vegetable and textile, manufactures of:				
Grass cloth....cases..	4	398		
Palm fiber or reeds....bales..	132	1,812	50	831
Straw cuffs....pairs..	182,500	2,436		
Work pockets....		287		
Gallnuts....pounds..			20,000	3,779
Ginger (preserves)....do....	6,262	1,011		
Ginseng....do....			2,267	129
Glass, manufactures of:				
Glass necklace....cases..	4	1,008		
Glassware....do..	58	2,246		
Glue....do..	6	334		
Hair, human....pounds..	30,554	15,907	61,363	28,969
Hides, cow....do....	101,600	38,020	25,770	9,624
Joss sticks....cases..	3,441	11,040	20	65
Matting....yards..	1,881,652	195,638	742,680	102,080
Mats or rugs....do...	117,657	25,390	53,200	8,708
Metal, manufactures of....cases..	9	679		
Moss and sea grass....bales..	9	116		
Oil:				
Aniseed....pounds..	5,100	8,672		
Cassia....cases..	25	1,297		
Wood....pounds..			154,000	24,894
Ore:				
Wolfram....tons..	180	142,023	1,641	1,546,925
Molybdenite....pounds..			360	403
Paper....do....	3,329	961	1,860	354
Paper, lithographic....cases..	90	1,525		
Precious stones: Jadeware....do..	21	13,661	14	1,757
Seeds:				
Aniseed....pounds..	20,000	3,456		
Star aniseed....do....			2,000	3,577
Silk, and manufactures of:				
Raw silk....do....	2,282,375	10,168,978	1,670,161	7,995,465
Waste silk....do....	2,879,032	1,828,264	4,330,149	3,015,258
Cocoons, pierced....do....	4,966	2,010	93,800	52,521
Silk goods....cases..	21	3,031	9	7,316
Embroideries....do..	293	69,631	83	16,361
Punjum books reeled from refuse cocoons.pounds..			6,000	6,230
Spices: Cassia—				
Buds....do....			33,332	3,015
Lignea....do....	66,667	5,572		
Saigon Promi....do....	6,667	3,745	13,332	4,019
Selected broken....do....	862,722	57,528	4,078,804	185,964
Tea....do....	800	219		
Tobacco leaves....do....	1,286,670	371,302	152,128	53,388
Wood, manufactures of:				
Bamboo—				
Baskets....cases..			2	154
Split....bales..	15,901	37,391	11,823	26,461
Ware....cases..	130	6,649	37	2,995
Blackwood ware....do..	512	13,328	60	2,807
Canes....bales..	380	1,785	242	1,763
China reeds....do..	2,906	35,187	4,303	64,657
Lacquered ware....cases..	41	1,758		
Rattan ware....do..	10	338	8	475
Woodenware....do..	195	10,073	1	143
All other articles....		5,174		697
Total....		13,554,938		13,426,599

Exports to the Philippine Islands were valued at $90,583 in 1918, as compared with $48,763 in 1917. To Hawaii there were no exports in 1918, and the value in 1917 was only $1,733.

In order to provide a basis of comparison with prewar conditions, the following table is given, showing the value of the declared exports from Canton to the United States during 1913, the last normal year before the outbreak of hostilities:

Articles.	Value, 1913.	Articles.	Value, 1913.	Articles.	Value, 1913.
Antimony	$10,957	Matting	$751,378	Wood, manufactures of—Continued.	
Bristles	20,230	Mats or rugs	26,228	Camphor-wood trunks	$193
Chinaware	13,773	Paper	1,553	Canes	7,616
Explosives: Firecrackers	231,210	Silk, and manufactures of:		China reeds	34,829
Fans, palm-leaf	42,064	Raw	5,881,582	Rattan	506
Feathers	3,735	Waste	654,752	Teakwood ware	2,736
Fiber, manufactures of	1,368	Silk goods	11,024	Woodenware	2,625
Ginger (preserves)	7,446	Embroideries	78,943	All other articles	11,238
Hair, human	10,335	Spices: Cassia	150,264	Total	7,995,770
Hides	212	Wood, manufactures of:			
India-rubber, shoe, scrap	1,729	Bamboo, split	12,891		
Joss sticks	13,381	Blackwood ware	10,973		

NOTE.—Exports to the Philippine Islands were valued at $8,305.

Of the exports from the other ports of this district, the most important is the tin export from Mengtsz in the Province of Yunnan. In 1910 this export amounted to 6,099 long tons and in 1914 to 6,681 long tons.

IMPORT TRADE.

The import trade of Canton in foreign goods has shown great increases. It rose from $9,847,980 in 1896 to $20,800,000 in 1906 and to $24,000,000 in 1914. Owing to the causes directly and indirectly attributable to the European war, the imports of foreign goods declined in 1915 to $15,834,000, but increased in 1917 to more than $29,500,000 and in 1918 to more than $32,500,000.

The imports of native goods from various ports in China, chiefly Dairen, Newchwang, Tientsin, Hankow, and Shanghai, have closely followed the imports of foreign goods. The importation of native goods in 1896 amounted to $11,340,000, in 1906 to $20,800,000, in 1914 to $14,800,000, in 1915 to $18,000,000, in 1917 to $21,740,000, and in 1918 to $21,415,439.

The gain in imports has been fairly steady, the high-water mark being reached in 1918.

One of the chief items in the import trade that has shown a steady diminution is opium. In 1904 there were imported 1,260,380 pounds of foreign opium, while in 1913 the amount had fallen to 317,252 pounds and in 1915 to 72,644 pounds. On account of the restrictions on its importation, the price of the drug steadily advanced during recent years. In 1912 the market value per picul of Patna opium was 1,850 taels ($1,369 gold); in 1914 it had risen to 5,380 taels ($3,605) and in 1915 to 6,100 taels ($3,733). As will be seen from the figures given, the trade in foreign opium has been gradually extinguished. The franchise of the opium combine expired on March 31, 1917, and the importation of foreign opium was discontinued from that date.

The facilities for the distribution of foreign commodities throughout the district increased enormously during the past few years. At present, during normal times, almost every town in the Canton delta is reached regularly by native steamers or steam launches carrying both passengers and cargo. The West River and its tributaries form a great highway for reaching the more remote districts of Kwangsi Province. In Yunnan the Yunnanfu-Tongking Railway also serves as a carrier of foreign goods from Tongking into the interior of Yunnan. On the other hand, the Province of Kweichow is one of the most difficult of access, it being very mountainous and the highways of approach both by land and water being comparatively few. It is also one of the poorest Provinces in China and offers very little field for the introduction of foreign imports. Canton is not a distributing point for any very large area. The Chinese merchants living at Shiuhing, Wuchow, Nanning, and various places along the West River, and also at Kongmoon, Shiuchow, etc., prefer to deal directly with the Hongkong importer rather than with Canton. The reason for this is not far to seek. Goods exported from Hongkong to Wuchow, Nanning, or Kongmoon pay only the one import duty at the port of entry, whereas, inasmuch as there are no bonded warehouses in Canton, goods imported into Canton and reexported to the interior would have to pay, in addition to the import duty, the 2½ per cent transit duty.

Practically all firms in Canton employ Chinese compradors whose functions differ in no respect from those in other parts of China. The native customers of the firm are handled by the comprador, and he employs his own staff of subordinates.

As regards financing and credit, the terms of credit given in other parts of China apply also to this consular district. There are no special terms peculiar to the district.

As stated above, Canton is not a distributing center for a very large district. The goods imported there are for consumption in Canton, Fatshan (a city of 600,000 people situated about 12 miles distant), and other cities and towns within a radius of approximately 30 to 40 miles. The bulk of the goods are imported from Hongkong by water. All steam vessels are controlled by the Maritime Customs and pay the rates of duty laid down in the customs tariff. However, there is a large amount of traffic in native goods that is carried on by junk and other native craft. This traffic is not controlled by the Maritime Customs but by the Native Customs and the various likin stations. No fixed tariff or schedule of charges is published.

In this connection a few remarks with regard to customs dues and likin charges may be made.

All foreign goods must be passed through a Chinese Maritime Customhouse. These customhouses are located only at treaty ports. At each treaty port there is also located a head likin station, which controls the different situations throughout its district. The importer can obtain a transit pass from the Maritime Customs by a further payment of one-half of the import duty. This transit pass will enable him to ship into the interior without having to pay any likin; in other words, all likin and sublikin stations throughout the district will recognize such a pass and not levy any further taxes. These transit passes can only be obtained by the importer after he has given the Maritime Customs the date of importation, the name of the steamer, the marks, value, etc., as declared by him originally. Transit passes can only be obtained for goods sent into the interior in the original package in which they were imported. After goods have been imported into a treaty port and it is desired to make shipment to the interior where it is only necessary to pass one sublikin station, a saving can be effected by not taking out a transit pass and only paying the likin tax, which is one-fourth of the import duty. But should it be necessary to pass more than one sublikin station, then another likin tax of equal amount must be paid, and for each successive sublikin station the same charge is levied. It therefore pays the shipper to take out transit passes where goods are shipped to places in the interior other than in the immediate vicinity of treaty ports.

Shippers to points in the interior, particularly along the West River, must take into consideration the ultimate market of their goods before deciding at which port they will pass the Maritime Customs. For instance, a shipper desires to ship goods from Hongkong to be used or sold in the Nanning district of Kwangsi. The most expeditious plan would be to ship by steamer from Hongkong to Wuchow and tranship from Wuchow to Nanning. In such a case no regard need be paid to the customs until the goods arrive at Nanning, where the regular import duties will be levied, after which the goods can either be sold or forwarded into the interior either by transit pass or through the likin stations, as best suits conditions. In some cases where firms have no authorized representative at Nanning, the duty must be paid at Wuchow and the goods shipped to Nanning under the exemption certificate, which is recognized by the Nanning customs and which will permit delivery being taken of the goods at Nanning without further payment, but by so doing the shipper can not secure a transit pass for shipment into the interior beyond Nanning, and it will be necessary to pay the likin taxes.

Original importers may obtain drawbacks for customs duties that have been paid, should the goods be found to be unsalable in the market of the treaty port to which they have been shipped. For instance, goods are often imported into Canton for which there is no market. Afterward it is found that they can be sold at Hongkong. In this case, the original importer makes to the Maritime Customs an application for a reexport permit, giving the date of original entry, name of steamer, marks, etc. (always provided that the goods are in the original package). Upon verification by the customs a drawback, equal in amount to the duty paid in customs taels, will be given.

As regards packing, it must be borne in mind that the climate of South China is, during a great part of the year, very damp and humid, and goods that are liable to collect rust or mildew should be packed in waterproof coverings. The bulk of inland transportation throughout the district is by water, either by steamer, by steam launch, or by native junk.

The importation of cotton piece goods, which forms one of the principal items in the import trade of this district, is handled chiefly by British firms in Hongkong, who export to the Chinese dealers in Canton, Kongmoon, Wuchow, Nanning, and other places in the interior. The bulk of the trade is in Manchester goods, American cotton goods not having been sold on this market to any extent.

The demand in gray goods is chiefly for light-weight shirtings, 7 to 9 pounds. White shirtings are, however, the most important item in the piece-goods trade of Canton. The white shirtings sold are generally 36 inches wide, 43 yards per piece, and 50 pieces are packed in a tin-lined case. The principal demand is for heavily back-filled and medium finished goods. There is also a fair demand for printed goods, which is filled also from Great Britain. Of the imports of cotton yarn, it is to be noted that the Japanese yarn is gradually displacing the Indian yarn.

In metal goods there is a considerable market at the present time for such articles as steel plates, wire nails, galvanized wire, tinned plates, bamboo steel, iron and steel bars, lead, etc. Since the beginning of the war in Europe an increased percentage of this class of goods has come from the United States. In metal goods, as well as in piece goods, the importing houses are for the most part located in Hongkong.

The following table gives the quantities and values of the principal foreign goods imported at Canton during the years 1904, 1913, and 1918:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
OPIUM.						
Benares..............pounds..	154,266	$489,591	34,412	$471,719	....	....
Malwa..................do....	123,333	446,084	132,227	1,681,753	....	....
Patna..................do....	976,533	3,188,537	150,613	1,903,293	....	....
COTTON GOODS.						
Shirtings, gray, plain...pieces..	163,850	241,990	117,158	211,188	81,138	$444,680
Shirtings, white, plain, English..................do....	166,783	429,299	252,837	751,836	135,928	1,123,783
T-cloths................do....	42,818	60,475	37,543	63,893	43,232	165,378
Handkerchiefs..........dozen..	54,018	16,928	111,287	25,801	88,806	38,839
Cotton yarn:						
English..........pounds..	400	79	5,600	1,300	(a)	(a)
Indian..............do....	13,244,000	1,665,162	9,658,533	1,327,901	5,341,066	2,070,705
Japanese............do....	9,066	1,109	1,310,533	166,311	3,785,200	1,505,458
WOOLEN GOODS.						
Blankets and rugs.....pounds..	24,673	7,328	139,597	52,265	69,363	117,713
Camlets, English.......pieces..	6,777	50,990	2,643	27,212	717	23,669
SILKS.						
Silk piece goods, plain, brocaded..............pounds..	27,776	23,658	4,773	12,237	204,400	13,939
METALS.						
Brass and yellow metal. pounds.	926,266	104,475	971,867	137,379	638,132	213,873
Copper..................do....	5,648,000	799,963	344,133	55,572	267,199	115,783
Lead, in pigs and bars...do....	4,492,666	126,762	3,238,933	108,357	3,104,000	359,105
Tin slabs................do....	165,466	35,631	34,800	8,482	9,333	8,398
SUNDRIES.						
Belting, machine............	....	2,559	....	5,286	....	39,876
Bricks and tiles........pieces..	99,932	3,593	152,086	7,275	(a)	(a)
Cement...............pounds..	3,995,466	19,778	10,244,133	53,106	11,724,000	115,399
Cigarettes..................	....	91,830	....	278,383	....	1,713,975
Clocks................number..	34,485	22,702	52,790	47,518	24,056	36,401
Coal...............long tons..	67,664	236,689	74,817	335,667	25,594	449,413
Crucibles....................	....	21,110	....	1,434	....	12,993
Dyes, aniline................	....	124,564	....	136,696	....	135,112
Electrical materials........	....	28,765	....	72,163	....	257,687
Flour.................pounds..	33,760,133	626,673	56,961,866	1,228,072	2,380,667	87,626
Fruits and vegetables........	....	28,139	....	27,827	....	9,780
Ginseng, American:						
Clarified.............do....	213	837	12,889	40,860	896	3,654
Crude.................do....	521	962	1,180	1,107		
Glass, window..........boxes..	14,990	43,399	20,352	49,756	8,800	88,488
Graphophones and accessories..	....	1,076	....	13,131	....	16,815

(a) Figures are not available for 1918.

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.						
Hams and bacon......pounds..	37,733	$4,667	45,866	$6,387	40,983	$11,264
Hardware..........................	....	5,438	....	39,282	....	43,265
Hosiery................dozen..	84,648	53,772	126,715	75,666	31,739	17,765
Lamps and lamp ware..........	....	22,070	....	17,785	....	57,189
Leather, calf, kid, patent, and colored..............pounds..	400	380	24,533	44,928	(a)	(a)
Looking glasses and mirrors...............number..	101,116	3,171	87,165	3,064	....	9,662
Machinery and parts of.........	....	70,871	....	73,808	....	(b)
Machines, sewing and knitting, parts and accessories.........	....	15,641	....	79,996	....	36,508
Matches, wood, Japan...gross..	1,287,173	213,915	452,967	122,824	337,351	182,556
Meats, canned..........dozen..	2,084	3,712	259	687	....	3,742
Medicines........................	....	129,013	....	322,267	....	(b)
Milk, condensed, in tins..do....	22,296	21,338	64,806	82,033	56,427	161,561
Munitions of war...............	....	82,502	....	226,017	....	(b)
Oil, kerosene:						
American.........gallons..	6,110,620	796,116	8,953,382	997,229	5,506,494	1,562,530
Sumatra.............do....	3,256,797	360,468	1,630,871	174,422	2,138,289	643,907
Paper, printing.......pounds..	10,312,133	350,213	13,917,866	393,260	4,353,200	503,298
Quartz (corundum) sand.do....	291,866	7,945	416,533	8,996	(b)	(b)
Railway plant and materials...	....	291,940	....	28,017	....	(b)
Rattan core...........pounds..	1,700,533	64,731	1,012,000	31,149	426,933	19,710
Rattans, whole..........do....	3,259,333	96,803	5,197,466	159,979	4,294,667	266,291
Rice.......................do....	15,054,266	171,489	48,893,200	838,803	6,982,400	196,171
Shoes and boots:						
India rubber........pairs..	306,774	156,031	1,510	518	1,230	1,396
Leather.............do....	....	....	21,356	10,406	4,676	11,505
Singlets and drawers....dozen..	9,005	17,049	101,348	254,900	62,040	261,777
Soap:						
Bar...............pounds..	311,066	9,183	1,428,800	63,498	1,179,867	165,421
Toilet and fancy....dozen..	49,805	9,862	35,248	10,853	52,208	36,377
Sugar:						
Refined...........pounds..	3,926,133	103,977	1,393,466	45,903	1,783,467	115,533
White...............do....	18,096,800	438,938	59,262,400	1,875,298	49,042,667	2,615,302
Typewriters and accessories....	....	2,231	....	2,822	....	3,893
All other articles..............	....	4,688,816	....	7,217,694	....	16,419,126
Total.......................	....	17,133,019	....	22,513,271	....	32,514,466

[a] Imports of "leather, colored," in 1918 amounted to 13,867 pounds, valued at $30,451.
[b] Figures are not available for 1918.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

There are no direct steamship connections between the ports of this consular district and the United States. All goods shipped from Canton and other ports of this district must be transshipped at Hongkong, from which point a number of steamship lines maintain regular sailings to various points in the United States. The principal trans-Pacific route is from Hongkong to San Francisco, touching at Shanghai and/or Manila, Japanese ports, and Honolulu. Service on this line both for passengers and freight is maintained by the Pacific Mail Steamship Co., the Toyo Kisen Kaisha, the China Mail Steamship Co., and the Java-Pacific Line of the Java-China-Japan Line. The Robert Dollar Line also maintains a freight service to San Francisco.

The route from Hongkong to Seattle and Tacoma is maintained by the Osaka Shosen Kaisha and the Nippon Yusen Kaisha. The service to Vancouver, B. C., is maintained by the Canadian-Pacific Ocean Services (Ltd.) and the Blue Funnel Line.

There are also various lines operating freight steamers from Hongkong to New York and Boston via the Suez and Panama Canals, including the Blue Funnel Line, the American-Manchurian Line, Frank Waterhouse & Co. (Inc.), the Nippon Yusen Kaisha, etc.

During the first year of the war the service between Hongkong and the United States was greatly reduced, owing to the withdrawal of numbers of ships for use in transporting troops. As a consequence, tonnage was exceedingly scarce and freights rose to an unprecedented height. However, numerous ships have since been added to the trans-Pacific service, and freight rates have consequently fallen.

There are no forwarding and express companies with offices in the Canton consular district in a position to attend to foreign shipments. The various steamship lines mentioned in the above paragraphs practically all have agents in Canton, and through bills of lading are issued to various points within the United States.

Ample facilities for the berthing of vessels exist both at the port of Whampoa, situated 10 miles below Canton, and at Canton harbor itself. At Whampoa vessels drawing up to 23 feet of water during the spring tide, and 20 feet of water during neap tide, may be berthed. At Canton the limit is 17 feet during spring tide and 15 feet during neap tide. The only other ports on the seacoast are Pakhoi and Hoihow, on the island of Hainan. The harbors there are fairly shallow, and seagoing vessels are compelled to anchor at some distance from the shore. The open ports on the West River—Samshui, Wuchow, Nanning, and Lungchow—are available only for light-draft river craft.

The only port dues charged at any of the treaty ports in this consular district are tonnage dues, amounting to 4 mace, normally equal to about 32 cents United States currency, per registered ton if the vessel is over 150 tons. Under 150 tons the rate is 1½ mace per ton, equal to 12 cents United States currency. A vessel that has once paid tonnage dues is exempt from further payment of such dues within a period of four months. These dues are collected by the Chinese Maritime Customs and cover lighting, port dues, etc.

FACILITIES FOR TRAVEL.

The only European hotel in Canton is the Victoria Hotel. This hotel has 60 guest rooms and is under European management. The rates are $7 Hongkong currency per day and upward. In addition, there are two semiforeign Chinese hotels on the Bund—the Western Hotel and the Oriental Hotel. These are patronized for the most part by Chinese, but European food is obtainable. At Macao the two hotels are the New Macao Hotel and the Boa Vista Hotel. Their rates are $6 Hongkong currency per day and upward. There are no European hotels located at the other treaty ports in this district, except two or three along the line of the Yunnan Railway in Yunnan Province. These are for the accommodation of travelers on the railway, since trains do not run at night.

The best season of the year for visiting this district is in the fall, from October to January. The weather during these months is temperate, the thermometer ranging between 40° and 70° F. During the spring the rainfall is apt to be heavy, while during the summer months of June, July, August, and September, the heat is very great.

Excellent steamship accommodations are maintained between the ports of Canton and Hongkong, there being three steamships each way per day. The fare varies from $4 to $6 Hongkong currency, according to the steamer. A steamboat service is maintained between Canton and Macao on alternate days. A line of river steamboats operate between Hongkong and Wuchow on the West River, and between Canton and Wuchow. The round trip from Canton to Wuchow is made in about five days. There are no hotel accommodations at Wuchow, but travelers may remain on the boat. The round-trip fare from Canton to Wuchow is $35 Hongkong currency. A motor-boat service is maintained between Wuchow and points farther up the West River, Nanning and Lungchow.

As regards travel to Yunnan, this is most easily accomplished by taking a steamer from Hongkong to Haiphong in Tongking, and thence by rail to Yunnan over the Yunnan Railway. There are several lines of steamers running between Hongkong and Haiphong, namely, the Compagnie de Navigation Tonquinois, the Osaka Shosen Kaisha, and the China Navigation Co., the fare varying between $40 and $50 Hongkong currency, depending on the line. The trip to Haiphong takes between two and three days. From Haiphong to Yunnanfu, the journey may be made in three days, stopping at night. The first-class fare, Haiphong to Yunnanfu, is $55 Hongkong currency.

TRADE ORGANIZATIONS IN DISTRICT.

CHINESE CHAMBERS OF COMMERCE.

In Canton is located the Canton General Chamber of Commerce for the Province of Kwangtung. The various chambers of commerce in the other cities of the Province, with the exception of that at Swatow, which is independent, are considered as branches of this central organization.

The present system of chambers of commerce was established about 10 years ago, as the result of an imperial edict by which these bodies were given an official character and a seal was issued to each independent chamber from the central Government in Peking. The chief function of the chambers of commerce is to bring the grievances of individual firms to the attention of the officials of the Government in such a manner as to insure a hearing and to settle differences by arbitration when the contending parties are willing to submit their case in this manner. The reason that they do not occupy themselves with the active promotion of commerce in the various cities and towns in which they are located is that each trade guild jealously exercises control over all the merchants in any one line of trade and might resent the attempt of the chamber of commerce to take any action affecting that particular line. The officers of the Canton Chamber of Commerce are a president and vice president, who are elected annually by the members of the "Seventy-Two Canton Trade Guilds," subject to the confirmation of the Department of Commerce, Peking, under whose supervision are all chambers of commerce in the Chinese Republic. The address of the Canton General Chamber of Commerce is An Kung Street, Canton.

In addition to the General Chamber of Commerce, there is also the Canton Export Chamber of Commerce, located at Sun Hing

Street. This is composed solely of Chinese firms dealing in goods for export through the various foreign commission houses located on Shameen.

THE "SEVENTY-TWO GUILDS."

The number of guilds in Canton is, as a matter of fact, larger than 72, but because of the lack of statistics the exact number can not be ascertained. The name of the "Seventy-Two Guilds" was first applied to these organizations in 1906 during the tenure of office of Viceroy Tsen Ch'un Hsuan, when the Kwangtung government endeavored to take over the ownership of the Yueh-Han Railway, whereupon 72 of the various guilds registered themselves as being opposed to the scheme. Since that time the term "Seventy-Two Guilds" has become popular.

Almost every trade in Canton has its own guild, and almost every firm is a member of some guild. The object of each guild is to protect the interests of its members and to ameliorate their grievances. Each guild has its officers (usually the president also acts as treasurer) and certain committees, elected from among the members. They have their headquarters at the office of the organization and engage clerks and other employees to transact its business. These guilds have obtained a very considerable control over their respective trades. On admittance to membership a certain entrance fee fixed by the guild is required. The guild requires its members to adopt uniform terms of payment, including discounts, although many of them secretly violate this provision at the risk of being expelled. The regulations generally forbid a member to transact business with a nonmember. Ordinary meetings are held at various times, but special meetings are convened as circumstances require. Trades requiring skilled labor are divided into two guilds—the employers' guild and the employees' guild. The former requires the proprietor of a store to pay a certain entrance fee and its functions are practically the same as those of other guilds. The employees' guild requires craftsmen to undergo a certain term of apprenticeship, generally three years, before admission to membership. It regulates the wages paid and allows no one to work without first having been admitted to membership; nor does it allow firms to employ persons not members of the guild.

FOREIGN TRADE ORGANIZATIONS.

The European and American firms in Canton have a general Chamber of Commerce. In addition, the British merchants established in Canton have organized a British Chamber of Commerce. This organization conducts a language school for the benefit of young men of British nationality who desire instruction in the Chinese language. This school is also open to non-British employees in British firms. The address is Victoria Hotel Building, Shameen, Canton. There is also a French Chamber of Commerce in the French concession, Shameen.

AMERICAN INTERESTS IN DISTRICT.

HISTORICAL SURVEY.

The port of Canton was for a long time the only port open to foreign trade. Portuguese ships were the first of western nations to arrive, in 1516, the Dutch coming later in 1601 and the English about 1635.

American trade with Canton began shortly after the Revolutionary War. The first American ship to reach China was the *Empress of China,* commanded by John Green. It sailed from the city of New York on Sunday, February 22, 1784, and reached Whampoa, the anchorage for Canton, on the morning of August 28. It left Whampoa on the homeward passage on December 28, 1784, and arrived safely in New York Harbor on May 11, 1785. The supercargo of that vessel was Maj. Samuel Shaw, of Boston, who had served with great distinction as aid-de-camp to Maj. Gen. Knox from 1779 until the close of the Revolutionary War. A few days after the vessel's arrival in New York, he addressed an able and very interesting history of the voyage to Hon. John Jay, Minister of the United States for Foreign Affairs. This letter was laid before Congress, and that body directed the Secretary to inform Maj. Shaw "that Congress feels a peculiar satisfaction in the successful issue of this first effort of the citizens of America to establish a direct trade with China, which does so much honor to its undertakers and conductors."

The second ship was called the *Pallas,* and it was consigned to Robert Morris, one of the signers of the Declaration of Independence and a well-known patriot, capitalist, and merchant of Philadelphia.

These two ships carried to America, with their other cargo, 880,100 pounds of tea. In the years 1786–87 there were five ships engaged in the trade. They exported to America 1,181,860 pounds of tea.

In 1786 Maj. Samuel Shaw returned to Canton in the American ship *Hope,* bearing a commission as the first United States consul to the port of Canton. The outward-bound cargo from America brought to China by these early ships appears to have consisted largely of ginseng, while the return cargoes were composed of teas.

The number of American vessels that arrived in Canton during the year ended June 30, 1833, was 59. These vessels brought quicksilver, lead, iron, South American copper, spelter, tinned plates, Turkey opium, ginseng, rice, broadcloths, camlets, cambrics, velvets, handkerchiefs, linen and cotton drills, cotton yarn, cotton prints, land and sea otter skins, fox skins, sealskins, sandalwood, music boxes, clocks, watches, and sundry other articles, and on their return they were laden with teas, silk, cassia, camphor, rhubarb, vermilion, chinaware, etc.

In 1842 Great Britain concluded a treaty with China which opened to foreign commerce not only Canton but also the ports of Amoy, Foochow, Ningpo, and Shanghai. It also provided for the cession of the island of Hongkong to Great Britain. The United States concluded a commercial treaty with China in 1844. Business moved on peacefully and prosperously at Canton until 1856, when in consequence of the serious demonstrations that were taking place at Canton and elsewhere against foreign trade, English and French gunboats appeared in Canton waters. It was at this time that the foreign factories were sacked and burned. The result was immediate and effective hostilities, and the city was taken without difficulty by the allies.

On the return of peace in 1858, most of the foreigners, including Americans, removed to the Honam side of the river, almost immediately opposite the old factory site. In the meantime the English and French were busy in raising the island of Shameen to its present level.

During this period American trade with Canton flourished exceedingly. Several large American firms were established, notably Russell & Co., and the swift American clipper ships made rapid and profitable voyages between Canton and the ports of Boston and New York. Of the river steamboats plying between Canton, Hongkong, and Macao four were American. However, during the period of the Civil War, owing to the depredations of the privateer *Alabama* and others, American interests were considerably affected—merchants, both American and foreign, preferring to forward their merchandise in foreign-owned vessels rather than pay the increased insurance premium or run the risk of capture by the aforementioned privateers.

During the year 1873, 17 sailing vessels cleared the port of Canton bound for New York, as against 13 for London, 12 for Hamburg, and 4 for Buenos Aires.

Owing to the opening of the northern ports and the rapid rise of Hongkong as a trading mart, the importance of Canton declined during the seventies, eighties, and nineties. American shipping during this period became less and less. The old-established American firms, such as Russell & Co., went out of business, and American commercial interests at Canton were at a low ebb.

During the period following 1900 there has been a considerable increase in the trade of Canton, and likewise American trade has to some extent increased.

MISSIONARY INTERESTS.

The city of Canton was the scene of the first Protestant missionary work in China. The first missionary, Robert Morrison, came to China in 1807. At present American and other Protestant missionaries are established in nearly every one of the larger towns and prefectural cities in the Province of Kwangtung. This Province contains more Protestant mission stations than any other Province in China. The number of stations at which foreign missionaries are located is 70 in Kwangtung, 9 in Kwangsi, 13 in Kweichow, and 10 in Yunnan. American missionary interests are larger, both in number of workers and in capital invested, than the Protestant missions of any other country. As an example, there are 21 foreign Protestant missionary and benevolent societies located in the city of Canton, 14 of which are American. The number of Americans engaged in missionary and other benevolent work among the Chinese is 249 in Kwangtung Province, 35 in Kwangsi, 11 in Yunnan, and 4 in Kweichow—a total of 299, or 77.6 per cent of the adults of American nationality residing in this district.

American missionary societies have established numerous schools, colleges, hospitals, training schools for nurses, etc., in addition to the purely evangelical work that they undertake.

In addition to the places at which missionaries reside, these societies own or rent hundreds of buildings in different towns and cities in the interior that are used as chapels and schools.

The American missionary and other benevolent societies represented in the Canton consular district are:

American Bible Society.
American Baptist Foreign Missionary Society.
American Board of Commissioners for Foreign Missions (Congregational).
American Reformed Presbyterian Mission.
China New Testament Mission.
Christian and Missionary Alliance Mission.
United Brethren Mission.
Board of Foreign Missions of the Presbyterian Church of the United States.
Pentecostal Mission.
South China Boat Mission.
South China Holiness Mission.
Seventh-day Adventist Mission.
Swedish Evangelical Free Church of the United States of America.
Young Men's Christian Association.
Young Women's Christian Association.
Canton Christian College.
Canton Medical Missionary Society.
John G. Kerr Hospital for the Insane.

In addition to the American missions, other Protestant missionary interests are represented by societies from Great Britain, Canada, New Zealand, Germany, and Sweden. The Catholic missionaries are of French, Italian, and Portuguese nationality.

COMMERCIAL AND OTHER NON-MISSIONARY INTERESTS.

The commercial interests of the United States in South China at the present time are confined largely to the port of Canton. The Standard Oil Co. maintains an office, godowns, tanks, and a canning factory there, having charge of the company's business in the Canton delta and along the West River. Branches of the company, with Americans in charge, are also maintained at the open ports of Kongmoon, Pakhoi, Hoihow, Wuchow, and Nanning, and likewise at Yunnanfu, the capital of Yunnan Province. The other American firms in Canton are for the most part branches of firms in the United States, and are engaged only in one particular line of business. There are at the present time no general import and export firms of American nationality maintaining offices with Americans in charge at any ports in this consular district, although one or two of the large American firms in Shanghai and Hongkong have agencies established there in charge of Chinese.

The export trade from Canton to the United States, although large—amounting to approximately $7,000,000 United States currency annually—is almost wholly in the hands of firms of British, French, Japanese, and, prior to the war, German nationality.

The exportation of raw silk, which amounts, on an average, to 46,000 bales annually, more than half of which now goes to the United States, is entirely in the hands of French, British, Japanese, and Swiss exporters, although there is one branch of a New York silk house that has established its headquarters in Canton for the purpose of making purchases direct.

The import trade from the United States, except in the case of kerosene and lubricating oil, sewing machines, and other lines of goods whose manufacturers market their own products in China, is almost wholly in the hands of British, continental, and Chinese firms.

The effect of the European war, since the first few months when trade was generally paralyzed, has been to stimulate the market for American products in this district. This refers principally to lines of goods that had formerly been supplied from the Continent of Europe. A shortage of the supply there compelled the Chinese to look to other markets to fill their wants. This is particularly true in metals of all kinds, such as iron and steel plates and bars, as well as in canned goods, chemicals, drugs, glass, etc.

There is no doubt that there is opportunity in Canton for a general import and export house with facilities and equipment to handle a fairly large turnover. If such a house, for instance, could establish trade connections in the United States for the exportation of raw silk as a staple product and also handle other commodities, both export and import, as well as fire and marine insurance, there is no doubt that, if it were properly managed, its success could reasonably be assured.

HANKOW CONSULAR DISTRICT.

By Consul General Edwin S. Cunningham.[1]

LOCATION AND AREA.

The city of Hankow is situated on the Yangtze River at its confluence with the Han River, and is in latitude 30½° north (about the same as New Orleans) and longitude 114½° east. Hankow, Wuchang, and Hanyang form the "Wuhan cities." On account of the iron industries located there they are termed by some the "Pittsburgh of China"; because of their great economic, manufacturing, and commercial importance in the heart of China, 600 miles from the sea, they are more frequently called the "Chicago of China." They might be called, with considerable reason, the "Manchester," on account of their cotton interests.

Hankow is the limit of navigation for ocean-going steamers on the Yangtze River. During about eight months in the year large vessels arrive with foreign cargo and depart with huge shipments of raw products to Europe and America, while in all seasons splendid river steamers ply between Hankow and Shanghai. Many people may have the opinion that a trip up the Yangtze would be one of discomfort and extremely dangerous, but those who have had the privilege of making this interesting voyage through this most fertile valley have found such an opinion very erroneous, for it is doubtful whether in any other part of the world a traveler can find more comfort or a better cuisine than on these river steamers, except where the charges are many times greater.

Hankow is midway between Shanghai and Szechwan Province, at the confluence of two rivers having numerous tributaries acting as feeders, and it is therefore wonderfully well located for handling the rich resources of the Yangtze Valley, most of the valley being within the limits of this consular district. The Yangtze River is recognized by all who are familiar with China as being the best part of the country, since "this valley is destined to become the center of industrial activities in the East, when the time comes for the East to awake to new industrial activities."

The Hankow consular district comprises the following Provinces:

Provinces.	Area.	Population.
	Square miles.	
Hupeh	71,428	24,900,000
Kiangsi	69,498	14,500,000
Shensi	75,290	8,800,000
Kansu	125,483	5,000,000
Honan, south of Yellow River	60,000	24,000,000
Kokonor region	(2)	(2)
Chinese Turkestan (Sinkiang)	550,579	2,491,000
Mongolia, not in Tientsin district	(3)	(3)

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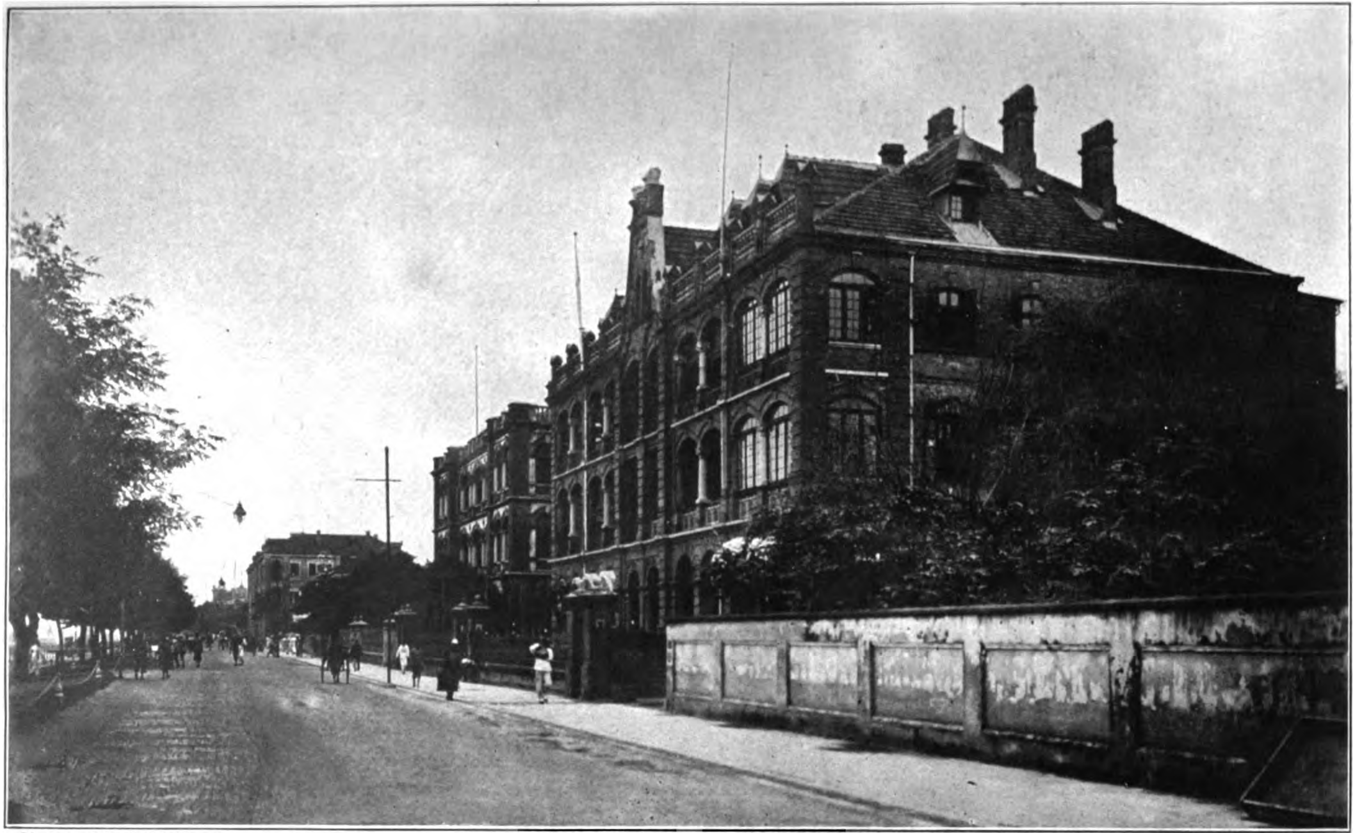
[1] The sections on "Physical Features" and "Climate" were prepared in the main by Consul Horace Remillard, while credit is given to Vice Consul William S. Howe for assistance in the preparation of the section on "Education."

[2] Not known, even approximately.

[3] Not well defined.



Photograph by E. M. Newman.

FIG. 6.—THE BUND AT HANKOW.

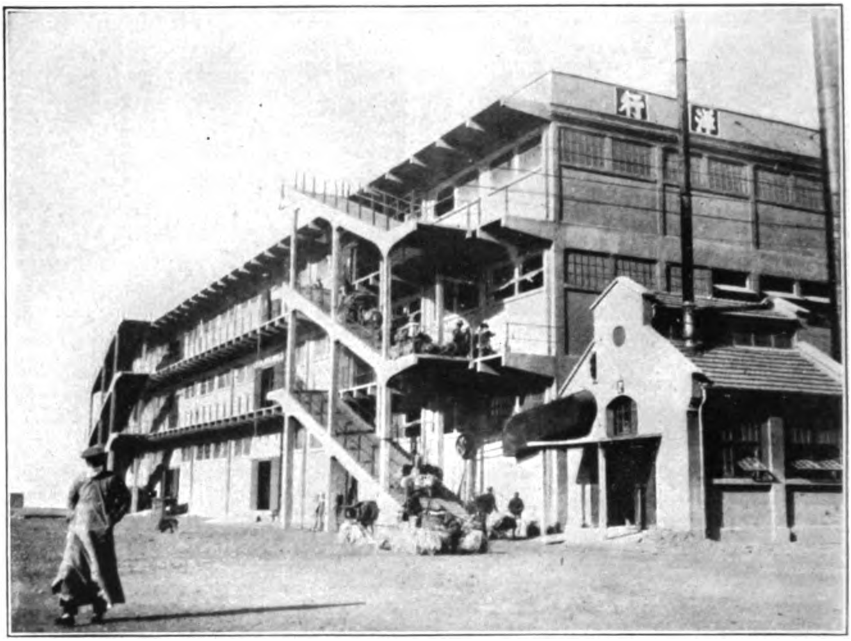


FIG. 7.—HIDE AND FIBER PACKING PLANT, HANKOW.

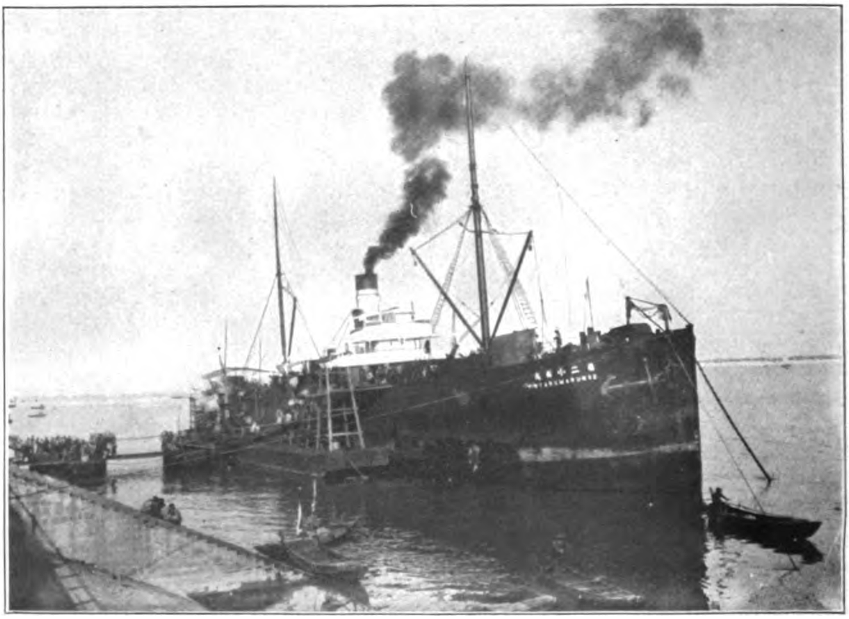


FIG. 8.—JAPANESE COASTING STEAMER, HANKOW.

In area this is the largest consular district in China, comprising more than 25 per cent of the total territory of the Republic and its dependencies. If Mongolia is excluded (because the limits are not well defined) and also the Kokonor region (because it is practically unknown and is of small commercial importance), there is still left 952,278 square miles, having as great undeveloped wealth as can be found in any district, as well as some of the most fertile lands and richest mines known. If one considers only the Provinces, whose areas are more or less definitely known and which require the attention of the Hankow consular office continuously, their area almost equals that of the States of Louisiana, Mississippi, Arkansas, Alabama, Georgia, Florida, Tennessee, and Kentucky, and if the remainder of the district of Sinkiang, Kokonor, and that part of Mongolia within this district are included, the areas of the States of Texas, South Carolina, Ohio, Indiana, Illinois, West Virginia, Virginia, North Carolina, and Missouri will easily be added to the first-named group. From the southern point of Kiangsi to the northwest of Kansu the distance exceeds 1,600 miles (4,800 li), extending from 25° to 41° north latitude, corresponding to the difference in latitude between northern Cuba and New York. Since the transportation is extremely primitive (being largely by means of chairs), it would require considerably longer than one month to make the trip. One can quickly pass from Charleston, S. C., to New Orleans and thence to El Paso, but to cover the same distance in China is a herculean undertaking.

POPULATION.

An accurate enumeration of the people by census has never been undertaken in China, but a number of estimates, based more or less upon reasonable assumptions, have been made. The one usually accepted by westerners as the most reliable is that known as the Minchengpu, 1910, though it is more than 30 per cent under that made by the Customs in the same year. The census taken by the Minchengpu, 1910—the results of which are embodied in a report submitted to the Department of State in Washington by Mr. R. P. Tenney and published in Daily Consular and Trade Reports for July 13, 1911—is used in the present report. However, any statement regarding population must be regarded, to some extent, as conjecture. In China numbers convey no accurate conception to the mind of an Occidental, because mere population gives no adequate idea of the potentialities of the inhabitants in production, consumption, or defense. By western standards a population of a million farmers in a fertile section should justify the effort to sell many agricultural implements and machines, but in China their demands for these articles are too small to mention. An equal urban population in the Occident would furnish endless openings for all kinds of vocations, as well as a market for all sorts of luxuries and necessities, but in China the promoter of an innovation would rarely receive a satisfactory reward. The people are poor, with a poverty that has come down through innumerable generations; they have had few wants and those have usually been supplied from the country; they know nothing of luxuries and, indeed, very little of necessaries. One must be impressed with the great natural wealth of the country; its soil is as fertile as any; its undeveloped mineral resources are supposed to equal the richest; but among these wonderful riches lives one of the poorest peoples of the earth.

Therefore American business men should not be misled when informed that the population of the Hankow consular district totals 79,691,000—23 per cent of that for all China exclusive of Mongolia and Kokonor, or 4,000,000 more than the entire poulation of continental United States in 1900. If Mongolia and Kokonor are added the number will probably be increased by 2,000,000. The density of population is greatest in Honan along the Yellow River, where it is 376 persons per square mile, and least in Sinkiang, where it is 4½ per square mile. Hupeh, with the large Wuhan cities and rich Yangtze bottoms, has 348, Kiangsi 208, Shensi 116, and Kansu 40 per square mile. Of all States of the American Union only Rhode Island, with 508.5, and Massachusetts, with 418.8 per square mile, have a population equal in density to that of the Provinces of Honan and Hupeh. Sparsely settled Kansu has approximately the same density of population as Iowa, Vermont, or Alabama, while only 23 of our 49 States have a population whose density exceeds 40 persons per square mile.

The single Province of Hupeh has an area equal to New York, New Jersey, Connecticut, Massachusetts, and Rhode Island, and though these are the most thickly populated per square mile of any of the States, their combined population is only two-thirds that of Hupeh. That part of the agricultural Province of Honan which is south of the Yellow River has an area equal to that of New York, Massachusetts, and Rhode Island, but it has twice as many people.

Canton, with its 900,000 people, is the only Chinese treaty port approaching Hankow in population; when one includes Hanyang, across the Han River, and Wuchang, across the Yangtze River, the population of the Wuhan cities (which are usually treated as one) is 1,321,284. The following are the treaty ports in this consular district, with date of opening and population: Hankow, opened in 1862; Ichang, opened in 1877, population, 55,000; Kiukiang, opened in 1862, population, 36,000; Shasi, opened in 1896, population, 95,000.

Other cities of great importance within the district are: In Honan—Kaifengfu, Honanfu, Hsuchow, Yencheng, Sinyang, Kioshan, Nanyang, Chowkiakow, and Chengchow. In Hupeh—Kingchow, Lachokow, Siangyang, Fancheng, Anlu, Tayeh, and Hsinti. In Kansu—Tsinchow, Lanchowfu, and Sining. In Kiangsi—Kingtehcheng, Nanchang, Pinghsiang, and Kanchow. In Shensi—Sianfu, Yenchang, Hanchung, and Tungkwan.

There are a few ports of call for passengers and cargo on the Yangtze, such as Hukow, Wusueh, Lukikow, Hwangshihkang, and Hwangchow. These places have been opened as ports of call by the Chefoo Agreement of September 13, 1876, and the Yangtze Regulations of 1898.

PHYSICAL FEATURES.

Because of the wide extent of this consular district and the varied physical characteristics, so widely divergent in each Province, it does not seem to offer a good basis of comparison with sections in the United States. The remote sections of Sinkiang, Kokonor, and Western Mongolia will not be included in the following account.

HONAN.

Honan is shaped like an irregular triangle. It is bounded on the north by Shansi and Chihli, on the east by Shantung, Kiangsu, and Anhwei, on the south by Anhwei and Hupeh, and on the west by Hupeh, Shensi, and Shansi. "This area is divided into three basins, that of the Yellow River in the north, of the Huai River on the south, and of the Han River on the southeast; the last two are separated by a marked range of mountains, the Fuh-nui-shan, which is regarded as the eastern terminus of the Kwanhui Mountains. This range maintains an elevation of 4,000 to 6,000 feet." The Peh and Tan Rivers drain its southern slopes into the Han, and the eastern sides are abundantly watered by numerous branches of the Huai River, as they flow into Hungtseh Lake. The northern portion of Honan along the Yellow River is level, fertile, and populous, forming one of the richest portions of the Province. (Williams's "The Middle Kingdom," p. 98.)

Kaifeng, the capital, is situated about 1 league from the southern bank of the Yellow River, whose bed is here elevated above the adjacent country. Other important centers are Honanfu, in the north-central part; Hwaikingfu, on the Yellow River; Nanyangfu, in the southwestern part; Changte, Weihwei, Chengchow, and Hsuchow, on the Peking-Hankow Railway; and Juning and Kweiteh in the western part of Honan.

HUPEH.

Hupeh is bounded on the north by Honan, on the east by Anhwei and Kiangsi, on the south by Hunan, and on the west by Szechwan and Shensi.

The Great River (Yangtze) flows through the south, where it connects with all the lakes on both its shores, and nearly doubles its volume of water. The Han Kiang or Han Shui rises in the southwest of Shensi, between the Fuh-nui-shan and Tapa Ling, and drains the south of that Province and nearly the whole of Hupeh, joining the Yangtze at Wuchang. It is very tortuous in its course, flowing about 1,300 miles in all, and is navigable only a portion of the year, during the freshets, as far as Siangyang, about 300 miles. Boats of small size come down, however, at all times from Sinpuwan, near its source in Shensi. The mouth is over 200 feet broad, but the bed of the river, as one ascends, soon widens to 400 and 500 feet, and at Shayang, 168 miles from Hankow, it is ½ mile wide. The area of the whole basin is about the same as the Province.

The extraordinary effects of a large body of melted snow poured into a number of streams converging on the slopes of a range of hills, and then centering in a narrow valley, bringing their annual deposit of alluvium and silt, are seen along the River Han. The rise of this stream is often 50 feet where it is narrowest, and the shores are high; at Ichang the channel varies from 300 to 1,500 feet at different seasons, but the river bed from 2,000 to 9,000 feet, the water rising 18 feet at the fresh. In these wide places, the river presents the aspect of a broad, winding belt of sand dunes, in which the stream wanders in one or many channels. Navigation, therefore, is difficult and dangerous, since moving sands shift the deep water from place to place, and boats are delayed or run aground. In high water the banks are covered, but the current is then almost as serious an obstacle as the shallows are in winter.

The southeast part of Hupeh is occupied by an extensive depression filled with a succession of lakes. The length and breadth of this plain are not far from 200 miles, and it is considered the most fertile part of China, not being subject to overflows like the shores of the Yellow River, while the descent of the land allows its abundance of water to be steadily distributed. Every spot is cultivated and the surplus of productions is easily transported whenever there is demand. The portions nearer the Yangtze are too low for constant cultivation.

The Ax Lake, Millet Lake, Red Horse Lake, and Mienyang Lake are the largest in the Province. The remaining parts of both the lake Provinces are hilly and mountainous (Hupeh and Hunan); the high range of the Tapeh Shan (Great White Mountains), commencing far into Shensi, extends west of Hupeh and separates the basins of the Great River from its tributary, the Han Kiang, some of its peaks rising to the snow line. (Williams's "The Middle Kingdom," pp. 142-143.)

The most important centers are the Wuhan cities (Hankow, Hanyang, and Wuchang), at the confluence of the Yangtze and Han Rivers, which occupy the same relative position to China as Chicago does to the United States, namely, that of a large industrial and shipping city in the central part of the country. Other important ports are Shasi and Ichang. The former has a canal, which discharges at Shayang on the Han River 40 miles away. Ichang was the terminus for light-draft vessels and all craft not navigated by the use of trackers prior to the introduction of the gorge steamers in 1900. Above Ichang are the Wushan, Milan, and Lukan gorges, famous for their picturesque scenery. Other cities of importance are Siangyang, Laohokow, and Anlu in the Han Valley, Tayeh in the southeastern part (famous for its iron mines), and Wusueh, across from Kiukiang in Kiangsi Province.

KANSU.

Kansu is bounded on the north and northeast by inner Mongolia and the Ordos country, on the east by Shensi, on the south by Szechwan, on the southwest by Kokonor and the desert, and on the northwest by Sinkiang. The Great Wall forms a part of its northern boundary but in many places is within the limits of the Province.

The Province is virtually divided into two sections by the mountains running nearly north and south, separating the Wei and Yellow River basins. The main pass connecting these two systems is near Titao, south of Lanchow. The Wei basin is fertile in character like the plain of central Shensi, but the rivers are of little use for navigation.

In the northern part of the Province there is a narrow strip of mountainous country reaching northwesterly from the Ala Shan to the confines of the Great Wall on the west.

The principal cities are Lanchow, the capital, on the south side of the Yellow River where it turns northeast, Pingliang on the King River, Kingkiang on the Wei, Minhsien in the extreme northwestern part on the Yellow River, and Sining on the Sinning River.

KIANGSI.

The Province of Kiangsi lies south of Anhwei and Hupeh, between Chekiang and Fukien on the east and Hunan on the west, reaching from the Yangtze to Kwangtung Province on the south.

Its form is oblong, and its entire area is made up of the beautiful basin of the Kan Kiang, including all the affluents and their minor valleys. The hilly portions form part of the remarkable series of mountainous ridges, which cover all southeastern and southern China, extending from Ningpo southwesterly to Amoy. It is made up of ranges of short and moderate hills, cut up by a complicated net of watercourses, many of which present a succession of narrow defiles and gentle valleys with bottom lands from 5 to 12 miles wide. That part of this region in Kiangsi has an irregular watershed on the east, separating it from the Min basin, and a more definite divide on the west from Hunan and its higher mountains. The surface of the land is rugged. It is well watered and drained by the river Kan and its tributaries, most of which rise within the Province; the main branch empties into Poyang Lake by numerous mouths, whose silt has gradually made the country around it swampy. For many miles on its eastern and southern banks extends an almost uninhabitable marsh, presenting a drainy appearance. (Williams's "The Middle Kingdom," vol. 1, pp. 111-112.)

The important centers are Kiukiang, on the Yangtze River; Nanchang, the provincial capital, on the Kan River; Nankangfu, at the mouth of the Poyang Lake; Jaochow and Kingtehchen in the western part, famous for their porcelain industry; Pinghsiang, near the Hunan border, where there are extensive collieries; Kianfu, in the south-central part, on the Kan; and Kanchow, in the extensive southern part, likewise on the Kan.

SHENSI.

The Province of Shensi is bounded on the north by the Ordos Country (Inner Mongolia), from which it is divided by the Great Wall, on the east by Shansi and Honan, on the southeast by Hupeh, on the south by Hupeh and Szechwan, and on the west by Kansu.

This Province has three separate geographical divisions—the fertile loess table-lands in the north; the plain in the center, drained by the Wei River and its tributaries; and the mountains in the south.

The northern section has a good soil, but on account of the uncertainty of the rains agriculture is rendered precarious. The Lukuan Shan and Pai Yu Shan constitute the mountain ranges and run from east to west. This section is watered by many small streams flowing into the Yellow River, which forms the eastern boundary of Shensi with Shansi Province, these streams flowing from northwest and southeast. The beds of the streams are cut deep into the prevailing loess formations, and consequently roads across are few. Yuleufu, in the extreme north, and Yenanfu in the north-central part, are the principal cities.

Central Shensi is the most populous section of the Province and lies in the fertile Wei River Valley. This river flows from the Yellow River at the point where Honan, Shensi, and Shansi come together, and its course is almost due west. There are no important branches of the Wei on the south side on account of the mountain country, which makes adequate outlets very scarce in this direction. On the north side, however, many small rivers flow northwest away from the Wei, its most important tributary being the King Ho. Sianfu, the capital city, is situated a few miles south of the Wei River. Other important centers in this region are Tungchowfu, on the Lo River, which empties into the Hwang Ho, and Fenghsiangfu, on the Wei River, near the Kansu border. The central Shensi plain is the most fertile agricultural section of Shensi.

The southern section has numerous mountain ranges, and geographically the division is marked out from the central portion by the Tsing Ling Shan, which acts as a watershed for the Wei and Han basins. The Han River flows through Shensi into Hupeh. Hanchungfu and Hinganfu are the principal cities situated on this river.

CLIMATE.

Only the most general statement can be made regarding the climate of this consular district, because of the varied physical characteristics in different sections, affecting climatic conditions over small areas. There is represented every variety of temperature, from the extreme winter cold of the confines of Kansu Province to the tropical heat of southern Kiangsi.

KANSU.

During the long winter months, Kansu is covered with snow and ice; all the rivers are frozen over, and the inhabitants, though clad in skins, protect themselves with difficulty from the cold. A bleak wind also blows from the table-land of Mongolia. In summer, the thermometer rises at times to 104° F. At this period, vegetation is luxuriant and the crops grow with great rapidity. Exception should be made for the southern part, however, which is very wet, owing to the rain-laden clouds that are wafted up from the south. In some valleys the climate is so mild that the fruits of South China come to maturity, such as the persimmon. The climate in the greater portion of Kansu is not unlike that of Missouri and Arkansas in many respects.

SHENSI.

The climate of Shensi is widely different to the north and to the south of the Ts'in Ling. In the north it resembles that of the region of the Hwang Ho, with its dry cold, its dust, and its violent storms. It may be compared to Nebraska in the United States for cold and dryness. In the south the climate is rather like that of Szechwan, without the northern or southern winds, these being prevented from blowing by the two mountain ranges. From February to October the sky is overcast and the atmosphere damp, while excessive heat prevails in summer. The cold sets in only at the end of November, and fall is the finest season. The climate of the southern part of Shensi is not unlike that of Missouri and Arkansas as regards temperature, but the thermometer and barometer are much more subject to sudden changes. The thermometer reaches 0° F. in winter and about 105° F. in summer.

HONAN.

The Province of Honan is a portion of the same geographical division as South Shensi, is influenced by the same physical features, and hence its climate in the northern part is like that of southern Shensi, described above. Southern Honan is more in relation with Hupeh Province and forms a part of the Central China Plain; hence the climate is like that of Hupeh.

HUPEH.

The climate of Hupeh is very much the same as that of Shanghai, but is less moist. The sea breeze to cool the summer atmosphere is, however, absent, and in the hot season the nights are as warm as the days. Another feature of the summer heat is the fact that it is usually sustained over an extended period, as in 1913, when the average for 21 days and nights was 101° F. The heat very often reaches 104° or 105° F. and is then endured with difficulty, on account of the moisture in the air. In winter the thermometer seldom descends lower than 20° or 25° F. There is usually a short rainy season in winter and early spring, and a heavier rainfall during the summer. Autumn is often free from rains to early December. From the Decennial Report of the Maritime Customs (1902–1911), it may be noted that the annual total rainfall varies greatly at Hankow—from 27.27 inches in 1902 to 68.14 inches in 1909. The average for the 10 years appears to be 43.38 inches per annum. This is probably a good indication for other points along the Yangtze within the Province, as the storms usually follow the river.

The Yangtze River is the trade avenue that places Hankow in the position to make it the premier port of export for China. January and February are the lowest months for the river, while July and August are the highest. In the low season for a 10-year period it ranged from 9 inches below zero to 12 feet above, while the high-water mark ranged from 39 feet to 48 feet above.

The climate of Hupeh may be compared in summer to that of Louisiana and in winter to that of western North Carolina or eastern Tennessee.

KIANGSI.

The climate of Kiangsi is generally very hot in summer. During the winter the lakes between Kiukiang and the mountain background are occasionally frozen. In the neighborhood of Kiukiang and the Poyang Lake the climate resembles that of Hankow and Hupeh, with the same approximate extremes of temperature but with slightly more rainfall. In the south it is tropical like Canton. The summers in Kiangsi may be compared to those of Louisiana, the winters to those of the South Atlantic States. The Yangtze River is an important factor in the trade of this Province as well as that of Hupeh. Its highest point is attained in summer, when it ranges from 35 to 45 feet; its lowest is in winter, when it ranges from 9 inches below zero to 7 feet 6 inches above.

PROVINCIAL ADMINISTRATION.

The principal provincial officials are the military and civil governors (Chiang Chun and Hsun An Shih). The former is under the direct authority of the President and has control of all the military forces of the Province. Consequently, he is the highest provincial power, especially in times of emergency, when he is required to take action. His authority has been very extensive since 1911 on account of frequent situations of unrest.

The civil governor is also appointed from Peking, and he is the chief civil authority. His powers vary in the different Provinces, as certain ones of this class of officials are granted by presidential order special functions not enjoyed by other civil governors. The civil governors have become of less importance since 1915, as this position is being, in some instances, combined with the military and in all cases restricted, so that the military rule can be more easily established. Generally speaking, there are certain divisions (K'O) which are under his control through his administrative department (Cheng Wu T'ing). Other departments, such as foreign affairs, justice, and finance, report not only to him but to the central Government as well, this situation creating a dual responsibility. The divergence in practice is well illustrated in foreign affairs: Hupeh has a special envoy for foreign affairs (Wai Chiao Pu Te Pai Chiao She Yuan), who resides in the foreign concessions, Hankow, and who reports to Peking rather than to the civil governor; Kaifengfu (Honan) has a commissioner of foreign affairs for the whole Province, reporting to either the Board of Foreign Affairs at Peking or the civil governor; Kiukiang (Kiangsi) has a superintendent of customs in charge of foreign affairs, reporting to the civil governor at Nanchang; finally, foreign affairs in Kansu and Shensi are directly under the governor and are administered from his office. It should be noted that in Kansu the civil and military authority is vested in one and the same man, and this is becoming more general, as in Hupeh since August, 1916.

The civil governor has periodical reports to make to Peking, may request assistance from the military authorities, and has wide powers of supervision. His authority is limited largely by the fact that the majority of the subordinates in the provincial administration are appointed by the central Government, although he may recommend candidates for minor offices. The finances are usually under the control of the Department of Finance, reports being made to it and appointments and dismissals by it. The judge of the higher Shen Pan T'ing (Kao Teng Shen Pan T'ing Chang) is responsible to the Peking authorities, the civil governor acting in a supervisory capacity.

In order to carry out the provincial government each Province has a certain number of "tao," the chief official of which is the "taoyin." The latter has a machinery of administration similar to that of the civil governor for the whole of the Province. The civil governor exercises supervisory powers over the "taoyin," and the authority of the latter depends largely on the functions delegated to him by the former.

The third and last of the important administrative provincial divisions is the "hsien", which is under the "hsien magistrate." This official is usually supervised by the "taoyin" and the civil governor, as well as by the Shen Pan T'ing (on account of his judicial functions). He is also the tax-collecting official of his district and has the right to call upon the police to aid him in carrying out his official duties.

There is probably no class of officials in the United States corresponding to the provincial officials of the Chinese Province. All that can be said is that the "hsien magistrate's" functions, although more extensive, are not unlike those of the American justice of the peace.

The chambers of commerce are not official organizations, but their influence is so great as to give them a standing equal to that of any official. Their advice is sought in the enforcement of taxes, the payment of debts, the liquidation of insolvent estates, and often to determine the priority of claims. The chambers are organizations of great power when once their machines are put in motion.

EDUCATION.

The general educational progress of the Hankow consular district, as well as of China generally, during the last decade may be said to be of spirit rather than of substance. Since the abolishment under the Empress Dowager of the old system of literary examinations and the provision for a system of education along modern lines, the Chinese authorities have had to contend with lack of funds and constant political disturbances, making it impossible to realize in practice the regulations for reform sent out from Peking. The decline in the old-style learning, combined with the inability to bring about the general establishment of the new, has caused an "interregnum" in public educational progress. Since the revolution, however, there have been indications of gradual advance. It is not possible to give an estimate of the percentage of literacy, since the most unenlightened coolie generally recognizes a few characters, while the persons able to read a newspaper with facility are confined to the scholar class and the better-educated merchants. In general, it may be said that the number of Chinese sufficiently well acquainted with their written language to make practical use of it form an almost insignificant fraction of the vast population of the country.

The following review of the different branches of educational endeavor can be only a rough approximation to the truth. The figures for native institutions, though compiled from official sources, can be accepted only as a working basis, since the rather lax system of records hitherto employed in provincial offices makes impossible anything closely approaching accuracy. The figures for missionary activity are reliable as far as they go, but it has not been possible to obtain statistics from all districts where such institutions exist. What has been done is to enumerate the largest and most influential of the organizations.

NATIVE EDUCATIONAL ESTABLISHMENTS.

There are no native institutions to which the term "university" or "college" could properly be applied.

The following technical schools are located in Honan and Kiangsi, the only Provinces whose authorities are able to furnish information along this line: Honan—Honan Agricultural College, College of Political Science. Kiangsi—College of Political Science, College of Agriculture, First Grade Industrial School, Second Grade Industrial School, Commerical School.

There are no other special schools except normal schools, of which few can be considered of practical utility. For instance, in the 46 enumerated as located in Kiangsi Province, only six are entirely under Government control, and these are not supplied with proper facilities in respect either to teaching staff or material equipment. One happy exception is the Government Higher Normal School at Wuchang, which has a foreign principal and an attendance of 200.

There are "middle schools" as follows: Kiangsi—Government, 9, with 1,745 pupils; private, 13, with 1,400 pupils; total, 22, with 3,145 pupils. Kansu—Government, 6, with 423 pupils. Shensi—Government, 9; private, 1; total, 10, with 1,841 pupils. Honan—Government, 39, with 4,520 pupils. Hupeh—Government, 21, with 2,845 pupils; private, 8, with 596 pupils; total, 29, with 3,441 pupils. Grand total—106 schools, with 13,370 pupils.

There are elementary schools as follows: Kiangsi—Government, 94, with 7,697 pupils; private, 3,800, with 129,736 pupils; total, 3,894, with 137,433 pupils. Kansu—Government, 811, with 18,538 pupils. Shensi—Government, 2,065; private, 1,020; total, 3,085, with 81,732 pupils. Honan—Government, 4,601, with 127,608 pupils; private, 1,679, with 32,417 pupils; total, 6,280, with 160,025 pupils. Hupeh—Government, 1,841, with 57,178 pupils; private, 2,408, with 73,788 pupils; total, 4,249, with 130,966 pupils. Grand total—18,319 schools, with 528,704 pupils.

These totals, for a district whose population amounts to about 80,000,000, show how extremely backward education is. The average yearly expenditure since the revolution for these five Provinces combined has varied at amounts somewhat less than $5,000,000 United States currency.

Medical schools may be presumed to be almost nonexistent at present, since in the two largest Provinces of the district—Honan and Hupeh (the only ones concerning which any information is available)—the Chinese authorities, who are naturally optimistic as to the prospects of the territory under their control, speak of only one, a private institution with 72 pupils in Hupeh.

Hospitals are little more in evidence; in only one Province, Honan, have the authorities answered the consulate's request for information. This unresponsiveness is probably due to lack of reliable statistics. The hospitals mentioned by the Honan authorities are all in Kaifengfu and are entitled as follows: Honan Government Hospital, Rear Street of Siang Kio Ssu; Garrison Hospital, Mo Chang Kai; Kwang Chi Hospital, South Gate Avenue. It may be mentioned that one of the best-informed of the foreign doctors in the Province stated that so far as he had been able to find out there were no native hospitals.

The present use of foreign school equipment is small. The textbooks are prescribed by the Ministry of Education and supplied chiefly by the large printing houses at Shanghai, such as the Commerical Press and Chung Hua Shu Chu. The ink and brushes are of Chinese manufacture. The small blocks of paper, the notebooks, and the pencils employed for taking down lectures, calculating, etc., are also of native supply.

The possibilities for foreign equipment would seem to be limited to the more elaborate and expensive types such as laboratory outfits. At present these are not employed and the future prospects must depend upon the advance, the general extent, and the standard of education, which, in turn, are dependent upon a general political, economic, and social improvement.

What has just been said applies also to foreign hospital equipment.

FOREIGN EDUCATIONAL ESTABLISHMENTS.

The principal schools and colleges under foreign auspices and control in the Hankow consular district are as follows:

HUPEH.

Boone University, Wuchang.
Griffith John College, Hankow.
Wesley College, Wuchang.
David Hill Memorial Girls' Boarding School, Hanyang.
Huntington School, Ichang.
Church of Scotland Boys' Boarding School, Ichang.
China Inland Mission Middle School, Laohokow.
Central China Union Lutheran Theological Seminary, Shekow.
Wesleyan Boys' Boarding School, Tayeh.
Wesleyan Boys' Boarding School, Teian.
London Mission Boys' Boarding School, Tsaoshih.
London Mission Boys' Boarding School, Wuchang.
Union Normal School, Wuchang.
St. Hilda's School for Girls, Wuchang.
Wesleyan Girls' Boarding School, Wuchang.
Y. M. C. A. Middle School, Hankow.
Y. M. C. A. Evening School, Wuchang.

HONAN.

Norman McPhee Boarding School for Boys, Changte.
Canadian Presbyterian Mission Primary School, Hwaikingtze.
Hwaiking Missionary School for Girls.
Baptist College, Kaifeng.
St. Andrew School and College, Kaifeng.
M. Maxwell High and Normal School, Weihweifu.
China Inland Mission School, Yencheng.

KANSU.

Anglo-Chinese School, Lanchowfu.
China Inland Mission Boys' Primary School, Liangchowfu.
Christian Elementary School, Tsinchow.

KIANGSI.

William Nast College, Kiukiang.
China Inland Mission Girls' Boarding School, Hokow.
China Inland Mission Boys' Boarding School, Kanchowfu.
Rulison High School, Kiukiang.
St. John's Middle School, Kiukiang.
Baldwin School for Girls, Nanchang.

SHENSI.

Baptist Theological College, Sianfu.
English Baptist Girls' High School, Sianfu.

The primary schools under missionary control furnish no more promising field for foreign equipment than do those under native jurisdiction. Their programs conform fairly closely to the Government course; and their textbooks naturally are obtained from much the same sources. The petty stationery is usually furnished by the pupils themselves.

The higher institutions, such as Boone, Griffith John, and William Nast, are fairly well equipped. Scientific outfits are employed, and, as the instruction in many subjects is in English, there is a chance for progressive, soundly constructed textbooks to win their way on their merits. But the field is, of course, a very limited one.

The chief foreign medical schools of the district are the Union Medical College, at Hankow; the Male Nurses' Training School at Hankow; and the medical school at Boone University.

The hospitals are as follows:

HONAN.

China Inland Mission, Kaifeng (British).
Canadian Mission, Weihwei (British).
Canadian Church Mission, Kweiteh.
Catholic Hospital, Chumatien (Italian).
Augustana Synod Mission, Honanfu (Swedish-American).
American Lutheran Mission, Kioshan (Norwegian-American).
American Free Methodist Mission, Kihsien (clinic without hospital connection).
Augustana Synod Mission, Juchow (clinic without hospital connection).
Contemplated:
    Lutheran Synod Mission, Kwangchow (Swedish-American).
    Augustana Synod Mission, Juchow (Swedish-American).

KIANGSI.

Kuling General Hospital, Kuling.
St. Vincent's Hospital, Kiukiang (Catholic).
Danforth Memorial Hospital, Kiukiang (Methodist Episcopal, chiefly for women and children).
Nanchang Hospital, Nanchang (Methodist Episcopal Mission).

HUPEH.

Church General Hospital, Wuchang (American Church Mission).
International Hospital, Hankow.
Catholic Hospital, Hankow.
Japanese Hospital, Hankow.
London Mission Hospital, Hankow.
London Mission Hospital, Wuchang.
Wesleyan Mission Hospital, Hankow.

The prospects for the introduction of American hospital equipment in hospitals under foreign control would seem to be good. Those in control of even the best of the institutions state that the equipment leaves much to be desired, and the securing of improvements and new appliances is dependent only upon the obtaining of the necessary funds. The following clear presentation of this aspect of the question is quoted from one of the best qualified of the present medical missionaries in Honan. He is speaking of that Province alone, but conditions are sufficiently similar throughout this consular district to make his remarks applicable generally, with the possible exception of institutions located immediately in the Wuhan cities:

> As for equipment, we are all more or less crippled for want of men and funds. So far as I know, not one of the hospitals has a properly equipped pathological laboratory, and none have X-ray apparatus. The surgical supplies and instruments are all limited to the barest necessities. Where appliances can be made locally or improvised, this is done. Many of the instruments used are imported from Japan. These are, as a rule, too flimsy, but find a ready market because they are cheap and can be procured on short notice.
>
> The present institutions are all in the hands of progressive men and, unless stifled by shortsightedness and by lack of funds, are bound to grow.
>
> American hospital supplies will find a market only in so far as they can compete with the rapidly improving Japanese. Drugs, on the other hand, if properly marketed, will find a good market among American institutions, for we prefer the American standards and earnestly desire government protection in the matter of purity and quality. The deterring factors are loss of time in transit, cost of transportation, and import duties.

AGRICULTURE.

As the available data are very incomplete, much of the information contained in this section on agriculture was collected from the American missionaries and others resident in the interior of China. A list of questions was sent to 21 persons living in every section of this consular district, and the greater part of this chapter was compiled from information received from this source. It is not in accord in every particular with what has been published in other volumes, but it is thought that, by reason of its source, the information is more reliable than if it had been taken from volumes such as the China Year Book.

The Chinese are primarily agriculturists, and most of this territory is under cultivation (unless occupied by graves) except the mountainous districts. The soil is fertile and has great agricultural potentialities, though the mode of cultivation is extremely primitive. The wooden plow, the ancient hoe, the wooden-wheel cart, and other implements are the same as have been in use since very ancient times. The mountainous districts in western Hupeh are difficult of cultivation, and the farmers are forced to utilize every level tract, be it ever so small, in the valleys, and to terrace the mountain side to produce the crops that, at best, are inadequate to meet the demands of the population. A similar necessity exists for the sparse population on the heights of Kansu Province. On the whole, however, the Provinces composing the Hankow consular district are rich in agriculture but susceptible of unlimited expansion by the introduction of improved seeds, modern methods of cultivation and harvesting, and improved live stock.

ARTICLES PRODUCED.

The following statement will be interesting as showing some of the articles produced:

Barley.—Produced in Honan (planted in September, harvested in June), Hupeh (planted in October, harvested in May), Kansu, and Shensi; yield per acre, 5 to 25 bushels.

Beans.—Produced in Hupeh (planted in May, harvested in September), Honan (planted in June, harvested in October), and Kansu; yield per acre, 125 to 200 pounds.

Broom corn.—Produced in Hupeh and Honan (planted in March, harvested in July); yield per acre, 150 to 225 pounds.

Corn.—Produced in Hupeh (planted in March, harvested in July), Kansu (planted in April, harvested in September), and Shensi (planted in June, harvested in August); yield per acre, 15 to 35 bushels.

Cotton.—Produced in Hupeh and Honan (planted in May, harvested in September or October); yield per acre, 100 to 275 pounds.

Hemp.—Produced in Hupeh and Honan (planted in February or March, harvested in June).

Millet.—Produced in Hupeh (planted in June, harvested in October), Honan (planted in May, harvested in September), Kansu (planted in April, harvested in August), and Shensi (planted in March, harvested in July or August); yield per acre, 20 to 30 bushels.

Peanuts.—Produced in Hupeh (planted in March, harvested in September), Honan, and Kiangsi; yield per acre, 500 pounds.

Peas.—Produced in Hupeh, Honan, Kiangsi, Kansu, and Shensi; yield per acre, 125 to 200 pounds.

Potatoes.—Produced in Hupeh (planted in February, harvested in June).

Rice.—Produced in Hupeh (planted in June, harvested in September), Honan (planted in April, harvested in August), Kiangsi, Shensi, and Kansu; yield per acre, 1,000 pounds and up.

Sesame.—Produced in Hupeh and Honan (planted in June, harvested in August, September, or October); yield per acre, 12 bushels.

Silk.—Produced in Honan.

Sweet potatoes.—Produced in Honan and Hupeh (planted in May or June, harvested in August, September, October, or November); yield per acre, 40 bushels and up.

Tea.—Produced in Hupeh and Kiangsi (harvested in March and April).

Tobacco.—Produced in Hupeh, Honan, Kansu, Kiangsi, and Shensi.

Wheat.—Produced in Hupeh (planted in September, harvested in May), Honan (planted in October, harvested in June), Kansu, Kiangsi, and Shensi; yield per acre, 8 bushels and up.

The yields given above are not regarded as absolutely reliable, though they represent approximate averages made up from some

20 estimates furnished by American residents in various parts of the district. Most replies stated that no satisfactory basis for an estimate could be reached, but from those giving definite answers the above figures are taken.

Other agricultural products within this consular district are rye in Kansu, buckwheat in Hupeh and Shensi, indigo in Honan and Shensi, and alfalfa in Shensi. Pumpkins are raised in the entire district, and truck farming and gardening are extensively carried on throughout the territory. In fact, agriculture in China assumes rather the character of gardening (because of the small area each farm has) than of actual farming as understood in the west. Irrigation is a prominent feature in Honan and eastern Kiangsi.

The fruits that are found within this consular district are apricots, peaches, pears, persimmons, muskmelons, and watermelons, in addition to citrus fruits in Kiangsi and western Hupeh.

The reports received from the missionaries indicate that wheat is grown more extensively than had been thought, since every return mentions wheat as one of the principal crops.

IMPLEMENTS USED.

The implements used in agriculture are of the most primitive kind. One of the reports to the Hankow consulate states that "the implements refer a person back to the history of Israel." So far as can be ascertained, there has been no change in the agricultural implements, except in rare districts, since the dawn of history. The native plow, single-handed with iron point, drawn by one or two animals, the harrow drawn by one animal, the drag, the wooden mallet for breaking clods, the bamboo flail, the stone roller drawn by one animal for thrashing, the fanning mill of a very primitive kind, the hoes, rakes, axes, sickles (the last-mentioned used for the reaping of grain except in a few instances where scythes and cradles have been introduced), and the wheelbarrow are the important items. In Honan there is a crude four-shoe drill, not automatic, drawn by one animal, that is used in planting grain, but this is not in universal use. The carts are two-wheeled, both high and low, all the former having wooden wheels. In the cotton districts Japanese gins have been introduced in some places, but these are only crude ones. One of the replies from Shensi mentions "antiquated plows, antiquated seeders for three furrows, iron and wooden rakes, the hoe, which is the most important implement, the rake, the spade, the wooden pitchfork, the scythe, which has about an 8-inch blade and 1½-foot handle, the thrashing machine (antiquated), a large round stone to roll over when thrashing, as well as the old-style flails and some fan mills."

BEASTS OF BURDEN AND OTHER LIVE STOCK.

The beasts of burden are the horse, bullock, mule, donkey, ass, and water buffalo. One of the reports gives "horses, cows, oxen, mules, donkeys, water buffalos, as well as men. One often sees a man and a donkey pull together."

The live stock found throughout the district includes pigs, chickens, and ducks. Every farm has its pig, and every family, urban or rural, has chickens. The beasts of burden mentioned above are found in practically every section, except the water buffalo, which is found chiefly in the rice-producing sections. Goats, geese, and a few sheep are to be found in practically all of the district. One of the most noticeable things for a person first arriving in the Yangtze Valley is the relative absence of birds of the air and animals. The district does not contain a large number of cows, and probably one would see not more than a score in a day's travel, yet goatskins and the hides of cattle and buffalos are among the most important items of export from Hankow; necessarily, they are collected from long distances and over large areas of territory.

FERTILIZERS.

No manufactured fertilizer, unless bean cake is considered as such, is used by the farmer. The farmer, however, collects the ashes, garbage, and other refuse to apply to his fields; dog and pig dung is collected for the rice fields; sesame cake is also prominent in some sections; and an extremely limited amount of carbonate and hydrate of lime is found in the western part of Hupeh. It may be stated that animal and human excreta, bean cake, and ashes are the chief (in fact, the only) fertilizers in general use. Along the rivers collection of sediment during low water is very noticeable, the Chinese gardener and farmer making good use of this deposit.

PRODUCTS OF THE SEVERAL PROVINCES.

The silk industry is prominent in Honan Province. It is not as important an industry in Honan as it is in Shantung and other Provinces in the north, but it is worth mentioning.

The most important article of export from Hankow is tea, and the most important section for its production is Kiangsi and Hupeh. All of these fields send their produce to Hankow for sale, making this the chief black-tea market in China.

While cotton is perhaps grown in most parts of China, it grows best in Honan and Hupeh Provinces. It has become one of the principal articles of trade, and in importance ranks third in the exports from Hankow.

Tobacco is a mercantile crop in Hupeh, Kiangsi, Kansu, and eastern Honan and is grown intermittently for local consumption in Shensi. A few years ago there was a considerable stimulus in the growth of tobacco on account of the demand created by the establishment in Hankow of a cigarette plant, which undertook to use Chinese tobacco; thus increasing the production, which had already been augmented because of the prohibition against opium as a farm product. The cultivation of tobacco has not, however, been followed up as it was expected that it would be.

In Hupeh the most important tobacco-producing section is the district around Chunchow, the product reaching the markets of the world through Laohokow. Tobacco is also produced elsewhere, such as a few miles beyond Wuchang and intermittently over the Province.

The Kiangsi tobacco is grown in considerable quantities in the Poyang Lake district and in the east of the Province. It is of a slightly different quality (with a heavier leaf) from that grown in Hupeh.

In Kansu tobacco is grown—probably not very extensively, though the Kansu article is in great demand with the Chinese, and it is stated that it can be found for sale in many places in northern China. Lanchow is one of the chief producing centers in this Province.

In Honan tobacco is found in Siangcheng and Chengchow, the latter in the eastern part of the Province, but it is not generally considered an agricultural product suitable for growth for commercial purposes in other parts of Honan.

Shensi produces some tobacco, but it is only for local consumption and is not considered a mercantile article.

The time for planting and harvesting is about the same in the various Provinces as it would be in the United States. Planting occurs in May and up to the middle of June, and cutting takes place in August and September.

The yield in Chunchow is the greatest in this consular district. An American familiar with the production of this article in the United States and in China states that the yield is phenomenal, reaching as much as 1,500 pounds per acre, and the average in this part of the district would probably be more than 750 pounds per acre. While the yield at Chunchow is the greatest, other districts producing tobacco have an average yield within 100 pounds of that stated for the above district. There are no statistics of production, but it is estimated by what is considered a reliable authority that in Hupeh there are produced annually about 20,000,000 pounds, of which 15,000,000 pounds are sold on the Hankow market. Kiangsi produces 6,000,000 to 8,000,000 pounds, of which about two-thirds is sold on the market for export, while Honan produces about 7,000,000 pounds, of which 6,000,000 are forwarded to Hankow for sale. There is no reliable estimate of the production in Shensi or Kansu.

In the preparation of the land for transplanting, mules and water buffalos are used for plowing, and the tobacco is planted in a manner similar to that employed in the United States, about 24 inches apart.

Bean cake and sesame-seed cake are used extensively as a fertilizer, as is barn manure, but no commercial fertilizer is used by any of the tobacco planters. The same system of cultivation (by the hoe), planting, and fertilizing is used throughout the district. All tobacco is sun-dried, though the system is not the same in all districts; in the Han River district it is hung by a string to dry, while in the Poyang Lake district it is cured on bamboo frames and when curing is completed it is flat. None of the tobacco produced is suitable for anything other than to be manufactured into low-grade cigarettes or for use in water pipes. Though the Poyang Lake article is a slightly heavier leaf, it is not considered to be appropriate for the manufacture of cigars.

In every producing district much of the tobacco is distributed locally and in near-by villages to satisfy the demands of the immediate districts, but from Hupeh, Kiangsi, and eastern Honan the excess is forwarded to Hankow for sale. During the last two or three years it has been purchased chiefly by the Japanese, and during the last year buying agents of Japanese firms have gone into some of the districts to buy directly from the producers. There are other buyers on the Hankow markets, but they are the chief ones, and the tobacco is purchased by them to supply the manufacturers in Formosa.

Recent years have witnessed a wonderful development in the quality and exportation of sesame seed, which is grown very extensively in Honan and to a less extent in Hupeh. Since the opening of the

Peking-Hankow Railway, this item has advanced by leaps and bounds and it is anticipated that the seed will be an extremely valuable article in the export trade of China.

METHODS OF FINANCING AND MARKETING THE CROPS.

There is no recognized method of financing and marketing the crops. Of course the small farmer borrows money, but not in any recognized manner, though the Chinese money lenders have rules by which they advance money to farmers at a very exorbitant rate of interest.

The use to which the farm products are put is quite similar to that in the West. Cereals, of course, are not exported, but other products are important in the export trade of Hankow. The produce from the interior usually reaches the market there either through guilds or by direct shipment to the town by the small merchants. The principal agricultural articles entering into the export trade are tea, raw cotton, sesame seed, groundnuts, beans, tobacco, ramie, silk, and gallnuts. The subsidiary products forming an important feature in the export trade are hides, wood oil, bean cake, vegetable tallow, egg products, goatskins, and animal tallow. Tea, when manufactured into bricks, is sent to Russia, but as black tea it is distributed through European and American countries, the latter taking a considerably smaller percentage than the former. Egg products, which have become so important during the last few years, are sold in Europe and America in about equal quantities. Straw braids and hats are manufactured in Honan Province but do not form an important item of the foreign trade, though they are exported from this district to other parts of China. Beef and pork are important export articles, though the former has become such only since the commencement of the European war. The Allied nations have sent representatives to every station to procure beef directly from the farmer, with very satisfactory results.

MINERALS AND MINING.

There is probably less available knowledge of the mineral resources of Kiangsi than of any other part of China, for, with the exception of the well-known Pinghsiang coal mines and the less known Tan Shan Wan mines, it seems to be a blank; therefore the following data must be considered as excluding Kiangsi Province, where only the above mines are considered. In this consular district there are known deposits of gold, silver, lead, zinc, copper, antimony, iron, coal, fireclay, pottery clay, gypsum, salt, shales, and limestone suitable for cement making, and there are indications that petroleum exists.

In Hupeh the main mineral belt is adjacent to the Yangtze between Wuchang and the eastern boundary of the province, and it continues into Kiangsi. "This area consists of sedimentary rocks, through which have been intruded igneous rocks, and on or near the contacts are numerous occurrences of minerals, of which some have been extensively worked in former times and some are worked to a small extent at present." In northern, western, and southwestern Hupeh are some mineral occurrences of various sorts. Coal is found in a great number of places in the west, obtainable over the valleys of the Han and Yangtze and their tributaries, but the best bituminous coal found in China is said to come from near Tayehsien.

Iron ore is obtainable in a number of places, but in Tayeh it has been operated to a considerable extent and is being mined for the account of the Hanyang Iron and Steel Works. Much ore of the best sort is being exported from that district to Japan.

During 1915 there was established a mining bureau in Hupeh Province; it has been endeavoring to develop the mineral resources, but with just what success is not yet made public. A similar bureau exists in Honan, and nominally one in Shensi, but no great amount of information is obtainable from either. Some work is conducted in Honan, Hupeh, and Kiangsi under the last national mining laws, with local modifications (the latter being usually the principal features of the regulations).

At the present time foreign capital can not be invested under favorable conditions and controlled by foreigners, for it is not considered that private agreements with influential Chinese or the local officials afford satisfactory conditions. It is true that such agreements are in operation in some cases and at times are successful, by reason of the personality of the foreigners concerned. The local officials claim to consider favorably agreements for the operation of mines, but there has been no actual test to ascertain the amount of assistance this would give in view of existing laws. The main difficulty in trying to operate with foreign capital in China is the want of adequate provision under existing laws to protect foreigners against the heavy expenses during the developing stage.

Since the withdrawal of the Standard Oil Co. of New York from the Shensi mine, it is not thought that there are any mines operated entirely under foreign control and management.

FOREIGN VERSUS CHINESE METHODS.

A well-known mining engineer states that less than one-tenth of 1 per cent of the mines in operation in this consular district use modern methods or foreign machinery. The local methods of mining are to get out the available ore in the easiest possible manner, with no provision for future development, and when one hole is exhausted, for any reason, another is started. The Chinese considers this good business, though it is contrary to the best recognized practice of the modern miner. As an example, it is well known that explosives are a necessity for mining, but the Chinese use locally made black powder exclusively. There are no factories for foreign-style explosives in China, and the excessive cost of the imported explosives, together with the fear of the officials that the use of the explosives may be other than for mining, makes it difficult for the Chinese miner to obtain them. It will also be difficult and very expensive for foreigners to get them. While the estimate mentioned above is that of a well-informed mining engineer, one-tenth of 1 per cent would appear to a layman to be decidedly too low when one considers the total output of the various mines, because the Pinghsiang mines use extremely modern machinery and foreign methods as viewed by foreign-educated Chinese mining engineers. The same is true of the Tayeh mines, but to a less degree of the Honan coal mines. Certain it is, however, that with the introduction of foreign machinery, methods, and managing engineers, the mineral resources of this consular district would be increased enormously, and the output would be multiplied many times.

OUTPUT OF IMPORTANT MINES—EXPORTS DURING 1918.

The output of the Pinghsiang coal mines for the year 1917 was: Coal, 288,688 tons; coke, 252,326 tons. The output of the Tayeh iron mines for the same year was: Iron ore, 541,699 tons; limestone, 77,546 tons; dolomite, 14,620 tons. The output of the Tan Shan Wan coal mine on the Yangtze between Hankow and Kiukiang is not known. This plant is modern; it was formerly opened by a French company but was later sold to a Chinese.

The following statistics from the Maritime Customs Returns show the exportation in 1918 of antimony, brass and copper ingots, iron ore, pig iron, and scrap tin:

Metals.	Long tons.	Value.	Metals.	Long tons.	Value.
Antimony:			Iron:		
Regulus	4,043	$827,386	Ore	320,850	$1,350,427
Crude	738	62,709	Pig	119,459	14,221,724
Brass and copper ingots	32	12,282	Tin, scrap	180	3,714

All these metals are taken by the Japanese, except small shipments of antimony to America and Europe.

MINING POTENTIALITIES—POSSIBILITY OF SELLING MACHINERY.

The discussion of the mining potentialities is a big undertaking, and the situation can be presented satisfactorily only by a mining engineer. It is safe to say that there are excellent opportunities for the development of copper, lead, zinc, iron, and coal under favorable conditions for transportation, fuel, and labor, provided equitable agreements could be obtained from the Chinese authorities.

There are very few possibilities for the sale of mining machinery at the present time. This will depend entirely upon the development of mineral resources; as this goes forward, there will be demands for the usual mining machinery—including small hoisting plant, small mining pumps, small smelting plant—and these demands will increase as the industry opens. There might be demands for lead, zinc, and other wet concentration plants. This phase of the situation is dependent upon the development of the mineral resources that are known to exist. Until some satisfactory methods are devised for the development of these resources under foreign or native control, the demand for machinery will be insignificant and such as would be required by primitive methods for surface and near-surface mining.

[Much of the foregoing mining section was prepared by Mr. Frank L. Cole, a mining engineer of Hankow.]

MINES IN ACTIVE OPERATION.

The following mines are in active operation:

- Tayeh Iron Mines, Tayeh, Hupeh; property of the Han-Yeh-Ping Iron & Coal Co., Shanghai.
- Government Smelting Works, Yaokai, Kansu.
- Ching Hua Mining Co.
- Pinghsiang Colliery, Han-Yeh-Ping Iron & Coal Co.
- Tan Shan Wan Coal Co.
- Chiang Ho Mining Co.
- Kweichow Mines.

WATERWAYS.

The chief waterways within this consular district forming an important factor in its commerce are the Yangtze River (Yangtze Kiang) and the Han River (Han Ho).

The Yangtze enters this consular district from Szechwan, a few miles west of Batang, and while it is navigable for steamers for more than half the year from that point to its mouth, the dangerous rapids continue to Ichang, which is the western port in the Hankow consular district. The delta of this river is rich; as fine crops as can be found anywhere are produced along its bottoms through the Hupeh and Kiangsi Provinces, and thence to the sea. This great river is navigable for ocean-going steamers to Hankow (595 miles) for about nine months each year, and during all seasons a fine river steamship service is maintained from Shanghai. Above Hankow a steamship service of small vessels is maintained for about nine months in the year to Changsha and the entire year to Ichang.

At certain seasons the water is very low, necessitating the use of steamers of the lightest draft over the upper stage. It may be said that commerce depends upon the specially constructed gorge junks down to Ichang, whence the steamers become an important factor to Hankow. From Hankow to the sea the steamers form the most important means of transportation. While the junks do not disappear, the percentage of cargo carried by them is considerably less than above Hankow—the point which, by reason of the confluence of the Han with the Yangtze, receives for steamer the cargo from the Upper Yangtze, from the Han, and from the south through the Tung Ting Lake. The Yangtze is the most important artery in Central China.

The Hwang Ho, or Yellow River, describes the northern limits of the Hankow consular district, and while it is of considerable importance to commerce, it is more particularly of interest to the Tientsin district; therefore the discussion of it is omitted from this report.

The Tung Ting and Poyang Lakes are useful in furnishing junk routes to convey cargo to Hankow and other important trade centers, where goods are received and dispatched from and to the outside world.

The Yangtze is the only stream upon which foreign vessels are used for commercial purposes.

The chief trading centers situated on the Yangtze are Hankow, Kiukiang, Shasi, Ichang, Wusueh, Wuchang, Hanyang, and Hsinti, the first four of these being open to foreigners. The principal trading centers on the Han, none of which are open, are Tsaitien, Hsientaocheng, Yokiakow, Shayang, Anlu, Icheng, Siangyang, Fancheng, Laohokow, Chunchow, Pehho, Hsinan, and Hanchung.

It is a poor criterion of river freight rates to give the existing abnormally high ones, but the following may be of some use as showing the rate to Shanghai from Hankow on cargo for ocean transshipment: General cargo—1914, 3.10 taels per ton; 1917, 6 taels. Oils—1914, 3.10 taels per ton; 1917, 7.50 taels. Cotton—1914, 3.10 taels per ton; 1917, 4.50 taels.

The Yangtze River is extensively used by foreign vessels, 7,604 having cleared and 7,720 entered, with a tonnage of 2,960,763 and 2,964,930, respectively, during 1918.

RAILWAYS.

PEKING-HANKOW RAILWAY.

The construction of the Peking-Hankow line was begun in 1898 and it was opened for traffic in 1905. Exclusive of branches, it has 755 miles of line. It was constructed by a loan from Franco-Belgian capitalists. This loan was redeemed by one secured by certain provincial taxes, and in 1909 the Chinese assumed control, though many Belgian engineers have been retained. The construction material and the rolling stock were Belgian, though this line has recently purchased a number of American locomotives to replace worn-out ones.

NAN-HSUN RAILWAY.

The Nan-Hsun Railway, a provincial line, runs from Kiukiang to Nanchangfu, a distance of 87 miles. It is of the standard gauge, 4 feet 8½ inches. Its construction was begun in 1906, the first 20 miles were opened to traffic in 1910, and its completion to within a mile of Nanchang was accomplished in 1915. The line was constructed by Japanese engineers from two loans from the Bank of Taiwan, and it is operated by the Chinese under Japanese management. The material used is largely American, as is the rolling stock. Its head office is at Nanchang, Kiangsi Province.

TAYEH IRON MINES RAILWAY.

Between Hwangshihkang and Tiehshanpu, a distance of 17 miles, there is a light railway for the sole use of the Tayeh mines to convey ore to the river. It is owned by the Han-Yeh-Ping Iron & Coal Co. The railway's officers are in the employ of this company and should be addressed: The Han-Yeh-Ping Iron & Coal Co., Shanghai, China.

CANTON-HANKOW RAILWAY.

The Hupeh-Hunan section of the Canton-Hankow Railway is completed and open to traffic from Wuchang to Changsha (286 miles). This line is of standard gauge and was constructed under the Hukuang Loan of £6,000,000 (original loan). It is expected that this line will be connected at Hankow, by a bridge, tunnel, or ferry, with the Peking-Hankow line. Under the Hukuang Loan agreement the engineer in chief is a British subject, as are the subordinates also, except where Chinese are employed. The material and rolling stock are of Chinese and American origin.

SZECHWAN-HANKOW RAILWAY.

The Szechwan-Hankow Railway is to run from Hankow to Ichang, continuing to Kweichowfu. This line was originally to have been constructed with Chinese capital, by Chinese engineers, and work was begun on the Ichang-Kweichow section. Construction was in progress to a distance of 80 miles from Ichang in December, 1910. In May, 1911, the Hukuang Railway Loan Agreement was signed between the Chinese Government and the American, British, German, and French groups, providing for a 5 per cent sinking fund gold loan of £6,000,000, of which £500,000 is to be used for the redemption at a premium of 2½ per cent of certain unredeemed gold bonds of the total par value of $2,222,000 gold issued by the American China Development Co. on behalf of the Chinese Government, and the remainder for the construction (*a*) of a Government railway main line from Wuchang, through Yochow and Changsha, to a point in the district of Yichanghsien on the southern boundary of Hunan, connecting with the Kwangtung section of the Canton-Hankow Railway; and (*b*) of a Government railway main line from Kwangshui in Hupeh, on the Peking-Hankow Railway, through Siangyang and Kingmenchow to Ichang, and thence to Kweichowfu in Szechwan, to be known as the "Hupeh Section" of the Szechwan-Hankow Railway. A German engineer was to superintend the construction of the Kwangshui-Ichang section, and an American engineer will have charge of the Ichang-Kweichow section. During 1915, because of the European war, work was abandoned on the American section. In consequence, survey work on the German section was also interrupted.

At the time of the signing of the loan the line had been under construction on the part of the Chinese for one and a half years, during which period a little more than $3,000,000 is said to have been paid out by the construction department, while material, foreign and local, had been collected to the value of 1,200,000 taels. Eight miles of line had been laid, and construction trains were running for this distance. The embankment and bridges for a further 25 miles had been finished.

Only formation and masonry work has been done on the Hankow-Ichang section, which has been pushed from Hankow about 120 kilometers (75 miles). This is the so-called German section.

The Ichang-Kweichowfu section suspended operation, after completing surveys of the original line and extensions to Chengtu, maintaining only an engineer in chief and a nominal staff for protecting the property. This is the so-called American section.

The so-called German section of this railway has been taken over by the Chinese Government and is under the supervision at the present time (April, 1919) of the American engineer in chief.

CHOWKIAKOW-SIANGYANGFU RAILWAY.

The Chowkiakow-Siangyangfu Railway is only contracted for, but surveys are being rapidly pushed at this date (Apr. 1, 1917). The Siems-Carey Railway & Canal Co. which recently secured a contract designed to provide Kwangsi Province with its first railway communication, means serious business in China.

Hardly had arrangements been made to dispatch survey parties into Kwangsi than the Chinese Government arranged with the company for the construction of another line into regions entirely lacking adequate means of transportation for their products. The proposed line will traverse a rich part of Honan Province, part of the north of Hupeh Province, and will then run into the south of Shensi (another Province that has been devoid thus far of railway communication) by way of the upper Han River valley.

For the time being the eastern terminal of the proposed line is at Chowkiakow, on the Tasha River, in Honan, whence the line will strike direct to Yencheng, on the railway now connecting Peking with Hankow. Thence it will run southwestward, via Nanyangfu, to Siangyangfu, on the Han River, in Hupeh Province. From there it will follow the Han River valley into Shensi Province, the terminal being the city of Hanchungfu. At a later date it is possible that some modification may be made in this route in favor of a continuation of the railway now under construction between

Pukow on the Yangtze River, and Sinyang, on the existing railway between Hankow and Peking, to Siangyangfu.

Siangyang is near the head of navigation on the Han River, and can be reached by small launches. Quite a large junk traffic is maintained, and in summer freshets small junks even traverse the Han River as far as Hanchungfu, the terminus of the proposed line, some 600 miles from Hankow.

The Han River is, of course, the only artery into southern Shensi, and despite its rapids above Siangyang boatmen ply on it as long as water permits, and by taking advantage of freshets and floods, they manage to push right up to Hanchungfu, the journey from Hankow, some 1,120 miles, taking 60 days, and down 15 days. By road from Hankow the distance is but 620 miles, but when the mountains are entered the "road" is only a track over which nothing but pack animals can convey goods. (Far Eastern Review.)

TRAMWAYS.

There are no street cars within the Hankow consular district. There are serious doubts whether a tramway would be a paying undertaking anywhere outside of the treaty ports, and there would be serious objections on the part of the concession owners at Hankow to its introduction into the foreign concessions; it is not thought that during the existence of the five independent concessions any satisfactory proposition could be made to induce the concessions to admit street cars. At least two proposals have been put before the British Council, but each has been considered unfavorable, and really, unless a line could be built outside of the concessions, the time is not ripe for its construction.

ROADS.

There are no real roads outside of the foreign concessions in Hankow. There are paths all over the district; these are better in some localities than in others, and in parts of Honan they are in places broad enough to accommodate carriages, but in the main the paths are only sufficient to accommodate wheelbarrows. Some of the old imperial roads ran through this district en route to the south and west, but it is understood that none of these are sufficiently in repair to permit of their use by motor cars for an extended distance. These paths are in some districts extremely good for single-wheeled vehicles, and along the line of the imperial roads in Shensi and Honan and in the vicinity of the large cities in each of these districts and in Kiangsi there are a few miles of reasonably good carriage roads without any extensive macadamizing. The writer is of the opinion that the construction of a highway between Peking and Hankow would increase American trade more than would a similar expenditure in the construction of railways. Let the highway be surveyed and built along the old imperial road from Peking through Chengtingfu and Kaifengfu to Hankow, to be eventually extended through Yochow and Hengchow to Canton, and not only would the motor-car trade reach proportions never hitherto conceived, but other markets would be multiplied as well. Such a line would be but a beginning that would bring wonderful indirect benefit to the country financing it in the way of increased trade in new and old lines, and it might prove the salvation of China. Railways are fine, but highways are indispensable for the best development of China in any direction. In China they would be an innovation that would be the making of the nation in more ways than one. A combination of the automobile manufacturers, road-material manufacturers, and engineers to supply the finances for the promotion and construction of a main highway has been suggested by the Hankow consulate, because it is confidently considered that it will be the best means of developing the largest market for automobiles and would be of the greatest possible benefit to China.

POSTAL FACILITIES.

The Chinese post office is materially superior to what one would expect of a service so new, whose ramifications are so extensive. It would seem that the Hankow district is keeping pace with the best in the development of its postal service, which is so good that it is understood that the foreign post offices are suffering from the effect of the competition. The business at the Hankow post office during 1917 was as follows: Articles dealt with, 39,557,824 (including registered articles, express, and insured letters); registered articles, 3,853,900; express letters, 290,800; insured letters, 3,524; articles collected from letterboxes, box offices, and pillar boxes, 2,460,300; letters in native clubbed mails, 486,700; parcels, 750,700, weighing 2,548,900 kilos (5,619,305 pounds); money orders issued, $1,542,300 Mex.; money orders cashed, $1,013,900 Mex.

During 1916 parcel post was established between China and the United States, and, Hankow being served by steam, the parcel post may be delivered from Hankow to the United States or vice versa without extra charge. The international money-order facilities are confined to the foreign post offices; the time required for the first-class mail matter to be delivered from New York is from 30 to 37 days.

The following foreign post offices are maintained: Great Britain, at Hankow; France, at Hankow; Japan, at Hankow, with agencies at Tayeh, Kiukiang, and Shasi; Russia, at Hankow.

TELEGRAPHS.

The telegraph service leaves much to be desired in efficiency, though its extent is greater than one might expect. There are 34 stations in Hupeh, 20 in Honan, 18 in Kiangsi, 5 in Shensi, 11 in Kansu, and 16 in Sinkiang. The rate for transmission is the established rate for all China—9 cents per word in a foreign language, 6 cents in Chinese to all places in the Province, and 18 cents and 12 cents per word, respectively, to all other parts of China. Connection is maintained from Hankow to Shanghai, Peking, Changsha, Chungking, and intermediary as well as more remote points. Wheatstone apparatus is installed in Hankow.

Cable connections with the United States are through Shanghai, and the rate per word is $1.75 Mex.[1] to San Francisco and $1.95 Mex. to New York.

TELEPHONES.

There is a telephone system at Kiukiang with Kuling connection, but the number of telephones does not exceed a dozen.

A new system has recently been installed in Hankow, connecting the Wuhan cities, with a present subscription of 2,300 telephones and a potential system of 2,300 immediate and 10,000 ultimate capacity. The system has taken the place of the German system that was acquired in 1915 by the Chinese Government. It was installed by the Nippon Electrical Co., a Japanese concern, with Japanese and a small amount of American equipment. The plant is housed in a new building, and is modern in every particular. The schedule of rates is as follows for an unlimited service:

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[1] See footnote on p. 84.

AUTHORIZED CHARGES FOR SERVICE.

Instruments.	Inside boundary.	
	Initial fees.	Subscription per annum.
	$ Mex.	*$ Mex.*
Business telephone	15	84
Private telephone	15	72
Extension telephone under same roof	8	24
Extension telephone up to 50 yards from main instrument	10	35
Extension bell	5	6
Three-line switch	6	8
Five-line switch	8	12
Eight to 100 line switch	(a)	(a)

MOVING FEES.

Instruments.	Inside boundary.	
	To another house.	In same house.
	$ Mex.	*$ Mex.*
Main telephone	15	8
Extension telephone up to 50 yards from main instrument	10	6
Extension bell	5	3
Three-line switch	6	4
Five-line switch	8	5
Eight to 100 line switch	(a)	(a)

[a] The rates in these cases are fixed by special arrangement. If an extension telephone of more than 50 yards from main instrument is desired, or a special intercommunication system, a special arrangement must be made in each case. For table telephones an extra charge of $10 per annum is made.

NEWSPAPERS AND ADVERTISING RATES.

The principal newspapers in the Hankow consular district and their advertising rates (in Chinese silver currency) are:

The Central China Post (British), Hankow. Advertising rates: One month, $5 Mex. per inch, single column, per month; two months, $4 Mex. per inch, single column, per month; three months, $3 Mex. per inch, single column, per month; four months and over, $2.50 Mex. per inch, single column, per month. Discount—5 inches, 10 per cent; 10 inches, 15 per cent; 15 inches, 20 per cent; 20 inches, 25 per cent.

The Hankow Daily News (German), Hankow. Advertising rates: Per inch, single column, per month, 2 taels; per inch, single column, per day, 1 tael; per inch, single column, for every additional day, $0.30 Mex. Discounts are given for large advertisements on a sliding scale.

The National Gazette (Kuo Ming Hsin Pao) (Chinese), Hankow. Advertising rates: On the first day, $0.005 per character; on the second and third days, $0.0035 per character; after the fourth day, $0.0025 per character per day; after the eighth day, $0.002 per character per day; half a month, per column, $1.50 Mex.; one month, per column, $2.50 Mex. The price for advertisements on the cover and between the pages of the paper is double. The minimum number of long columns is three. The minimum number of characters in short columns is 50. The minimum number of days for an advertisement is three. The charge on trade-marks or stamps is calculated according to the space occupied. Advertisements concerning lawsuits or libel will not be inserted unless guaranteed by shop "chops," and the subscription for them must be paid in advance.

The Hankow Times (Hankow Chung Hsi Pao) (Chinese), Hankow. Advertising rates: On the first day, $\frac{1}{2}$ cent Mex. per character; from the second day to the seventh, $\frac{3}{10}$ cent Mex. per character per day; after the seventh day, $\frac{1}{5}$ cent per character per day. On advertisements published for one month there is 25 per cent discount. The rate for each line of characters is $2.50 Mex. The minimum advertisement is three lines (when the line is long) and it must be published for three days. The space occupied by cuts or trade-mark designs is charged according to the number of words that can be inserted in the same given space. Special rates for long periods (for a season or a year) can be arranged. Half price is paid in advance for advertisements for half a year or a whole year. The minimum advertisement is 50 characters and it must be published for three days, and for such advertisements no special cuts may be used. The price is as above mentioned. Advertisements to be put before the editorial section pay a double charge and those on the cover do likewise. For advertisements inserted between pages, an additional half price is added to the proper charge. Those put among news items are charged trebly.

Ta Han Pao (Chinese), Hankow. Advertising rates (minimum advertisements for long lines, three lines and three days): On first day, $0.40 per line; from second to seventh day, $0.25 per line per day; from eighth day, $0.25 per line. The price for advertisements between pages and on the front page is double. The minimum number of characters for short lines is 100, and the rates are: On first day, $0.06 per character; from second to seventh day, $0.04 per character; from eighth day, $0.03 per character. If the advertisement is of less than 10 characters, it is charged as if it were of 10. All payments must be in silver dollars. Charges for annual advertisements may be arranged.

Hankow Sin Wen Pao (Chinese), Hankow. Advertising rates (minimum advertisements for long lines, three lines and three days): On first day, $0.50 per line; from fourth day, $0.30 per line; from eighth day, $0.20 per line; before the editorial, on front page, and between pages, 50 per cent additional; by the month, $3 per long line. Rates for short advertisement of 100 characters: On first day, $1; from second day, $0.60 per day; from seventh day, $0.40 per day. Charges must be paid in advance, and dollars under par will not be accepted.

Public Opinion (Chinese), Hankow. On the front page the minimum advertisement is two columns, and the rates are: On the first day, $1 per column; from second to seventh day, $0.75 per column; from eighth day, $0.50 per column. On other pages the minimum advertisement is three columns, and the rates are: On first day,

$0.40 per column; from second day, $0.30 per column. The minimum number of characters for short columns is 50, and the rates are: On first day, $0.006 per character; from second day, $0.004 per character.

Hukuang Hsin Pao (owned by Japanese but published in Chinese), Hankow. The minimum advertisement is three lines for three days, every line to be of 50 characters and any number of words less than 50 to be reckoned as 50. The rates are: From first to third day, $0.20 per line per day; from fourth to seventh day, $0.15 per line; eighth day and after, $0.10 per line. Long-period advertisements can be arranged. Cuts and trade-marks are charged for according to space occupied. Rates for specially placed advertisements are $0.50 per line, with gradual reductions according to number of days inserted.

PUBLIC WORKS AND SANITATION.

There is some irrigation in remote parts of this district, but there is no general project large enough to be included in this report. There has been no reclamation of importance except that the Bund in Hankow has been extended and strengthened to resist the river. The reclamation is purely for increasing the available land for buildings and wharves. A very important reclamation was completed in 1916, extending the broad Bund some 400 feet up the river into the Chinese city.

Waterworks are established in Hankow (native city and concessions), Hanyang, and Kaifengfu. Electric lights are installed in Hankow, Wuchang, Hanyang, Shasi, Ichang, Kaifeng, and the Pinghsiang Collieries. The service in Hankow is well adapted to the needs, and at Kaifengfu it will be, but no words of praise are heard for the other installations. Only surface sewerage exists in the entire district, with occasional septic-tank service in Hankow. The fire service in the foreign concessions in Hankow is efficient (though a volunteer one), with modern equipment. In the Chinese cities will often be found a fire brigade, but those seen by the writer impress one humorously rather than as seriously efficient.

Prospective developments are worth watching, because many communities would consider sympathetically a proposal for lights, and it is far better that any scheme of this character should have its inception protected by foreign education rather than have a dangerous installation made. The British concession has long had under consideration the erection of a much-needed abattoir, but improvements will be slow while freight rates are as prohibitive as they are now.

The electric-light plants in the district are the following:

Companies.	Location.	Nationality.	Machinery.	Current.	Voltage.
Hankow Light & Power Co	Hankow	British	British	Direct	440
Hankow Waterworks & Electric Light Co.	do	Chinese	do	do	440
Hanyang Iron & Steel Works	Hanyang	do	American	do	440
Kwang Ming Electric Light Co	Ichang	do	German	do	220
Melchers & Co	Hankow	German[a]	do	do	220
Pinghsiang Colliery	Pinghsiang	Chinese	do	do	250
Pu Chao Electric Light Co	Shasi	do	do	do	220
Pu Ling Electric Light Co	Kaifengfu	do	do	Alternating	100
Tai Shoh Electric Light Co	Hankow	Japanese		Direct	440
Wuchang Electric Light Co	Wuchang	Chinese	German	Alternating	220

[a] Taken over by the Chinese authorities.

The Hankow waterworks are owned by the electric light company, have British machinery, and supply the concessions and the Chinese city. The capacity exceeds all the demands and the plant is one of the most modern and efficient in China. The Kaifengfu plant is also privately owned. There were tentative arrangements for the construction of waterworks at Wuchang, made prior to the war, but no progress has been made and the intentions are shrouded in some mystery.

TREATY PORTS AND FOREIGN CONCESSIONS.

The treaty ports of this consular district are: Kiukiang, Kiangsi Province, about 454 miles from Shanghai; Hankow, Hupeh, 142 miles farther up the Yangtze; Shasi, about 308 miles above Hankow; and Ichang, about 393 miles above Hankow—all on the Yangtze River. There are the following ports of call: Hukow, Kiangsi, Wusueh, and Lukikow.

Shasi was opened up by the Sino-Japanese Treaty of 1895, and in 1910 was estimated to have a population of 95,000. It is 308 miles above Hankow and is in the central part of the Hupeh plain, with canals radiating from it through the plain and into Hunan. One such canal connects it directly with Hankow by a much shorter route than that taken by steamers on the Yangtze; and to this canal must be attributed its failure to develop as a river port. At one time it was the ordinary place of transshipment for the Szechwan trade, but its importance has gradually declined in favor of Ichang. The only consular representative is that of Japan. The foreign population consists of the customs staff, missionaries, and less than a dozen others.

Ichang is 393 miles above Hankow and 85 miles above Shasi on the Yangtze River and has a population of 55,000. It was opened to trade by the Sino-British Treaty of 1876. It is commercially important as the terminus for light-draft vessels on the Yangtze River, this condition making it possible for the port to handle the trade of the rich Province of Szechwan. If the proposed railways are completed, it will be an important railway center as well. Germany, Great Britain, and Japan maintain consulates at Ichang. Foreign residence is limited to the small area on the river front. There is a large missionary community, the Maritime Customs staff, the post office employees, and representatives of 11 foreign firms seeking the upper-river trade.

Hankow, with Hanyang and Wuchang, the provincial capital, is located at the juncture of the Han and Yangtze Rivers, and these three cities are generally considered together and termed the "Wuhan cities." They have an estimated native population of 1,500,000 inhabitants. Hankow was opened up by the Sino-British Treaty of 1858 and holds its present important position, commercially and industrially, because it taps the rich Han Valley, because it is the terminus for heavy-draft vessels connecting with Shanghai, and finally, because it is the center of a proposed network of railways to connect all parts of China. Foreign concessions are owned at Hankow by Great Britain, France, Russia, Germany, and Japan. These concessions are administered very much like a small municipality in Europe or America. Each has a council provided by the rate payers, and the consular officer is the official head of each local settlement.

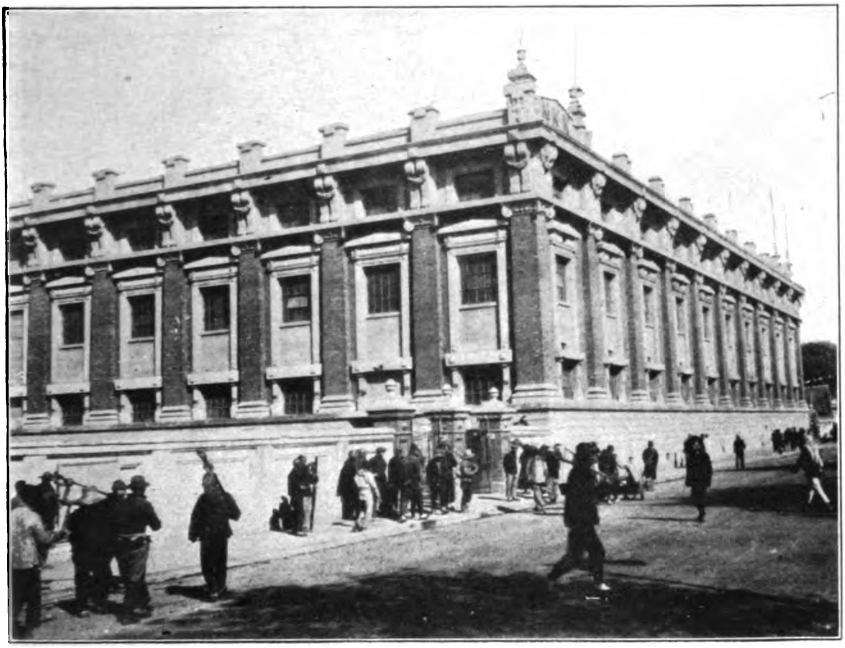

FIG. 9.—JAPANESE "GODOWN" (WAREHOUSE), HANKOW.

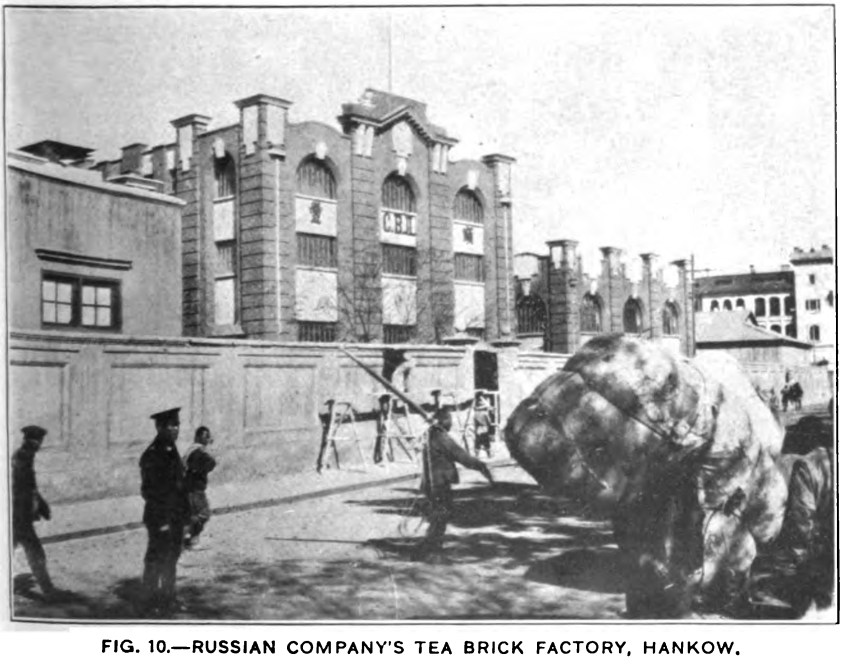

FIG. 10.—RUSSIAN COMPANY'S TEA BRICK FACTORY, HANKOW.

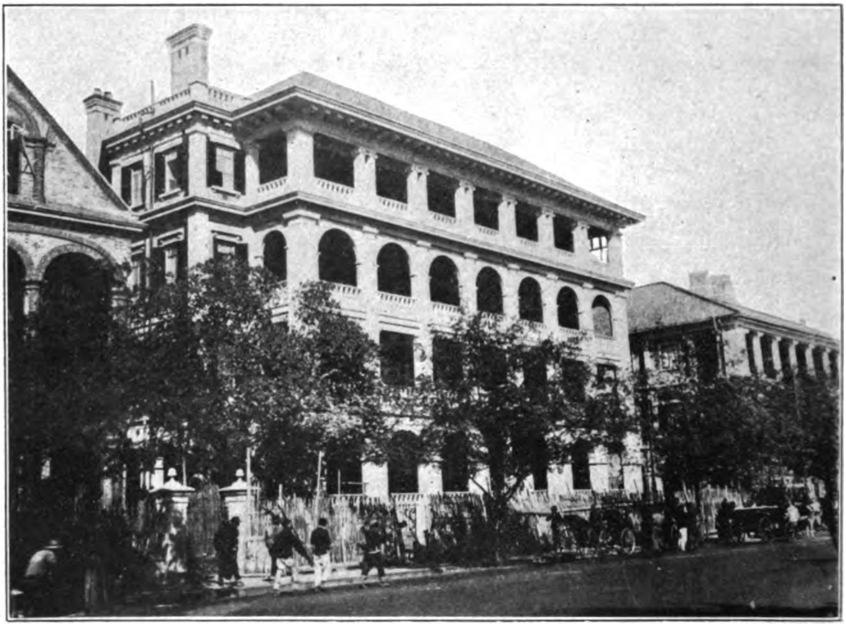

FIG. 11.—NEW OFFICE BUILDING FOR ENGLISH FIRM, HANKOW.

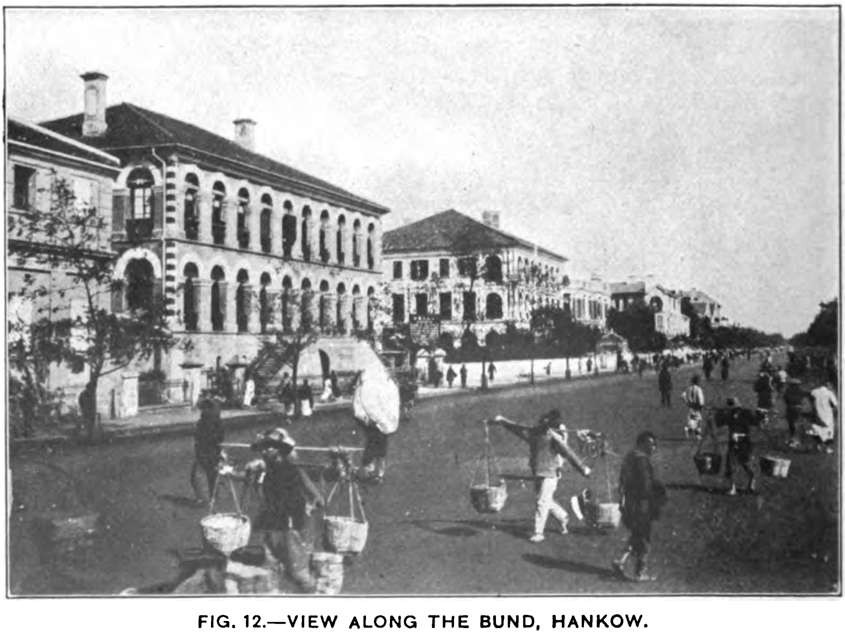

FIG. 12.—VIEW ALONG THE BUND, HANKOW.

In addition to the concession-owning nations, consular representation is maintained by the United States, Italy, Belgium, the Netherlands, Denmark, Norway, Sweden, and Mexico, the last five being represented by merchant consuls.

Kiukiang is the only treaty port in Kiangsi Province, unless the Kuling summer resort on the top of the mountain, west of the city, is considered as a treaty port. Kiukiang has a population estimated to be 36,000. The foreign merchants' residences are limited to the concession fronting the river. The small concession has a municipal council, of which the British consul is the head, and there are estimated to be 50 foreigners, including the missionaries, residing at this port. The nations represented by consular officers are Great Britain and Japan.

Kuling, 14 miles from Kiukiang, is a small settlement of perhaps 50 persons in winter and 1,800 in summer. It is a splendid summer resort. Foreigners are allowed to own property in this place, and it is governed by the lot owners, who have an annual rate-payers' meeting.

FINANCE AND BANKING.

The currency in circulation in Hankow consists chiefly of the Hupeh and Yuan dollars, which have rapidly supplanted the Mexican dollar, which was circulated to a considerable extent some time ago. The Hupeh and Yuan dollars are the only legal tenders for debt in Hupeh Province. Their value is the same. In addition to these dollars, some foreign banks located in Hankow issue bank notes for dollars, and these circulate freely within the city on a parity with the silver and Bank of China notes. The Hankow tael is a currency usually employed in commercial transactions of large character. The value of the Hupeh or Yuan dollar compared with the Hankow tael varies from 69.5 to 71, and 70 can be considered as a normal exchange rate from taels to dollars. The difficulties in foreign commercial transactions are fluctuations in the exchange value of the local currency, which is based upon silver, the lack of banking interests willing to advance money to pay for commodities for import or export, and the scarcity of currency at some periods. The scarcity of money could be overcome to a certain extent by the issuance of notes by the foreign banks which at the present time do not issue them and by increasing circulation by other banks. The foreign rate of interest for commercial transactions is 7 per cent and the native more than 7 per cent.

The foreign banks located within the port of Hankow are:

Asia Banking Corporation (American).
Banque Industrielle de Chine (Franco-Chinese).
Banque de l'Indo-Chine (French).
Chartered Bank of India, Australia, and China (British).
Credit Foncier d'Extrême Orient (Belgian).
Hongkong and Shanghai Banking Corporation (British).
International Banking Corporation (American).
Russo-Asiatic Bank (Russian).
Sumitomo Bank (Japanese).
Taiwan Bank (Japanese).
Yokohama Specie Bank (Japanese).

These banks transact exchange business and finance exports; they depend for their dividends almost entirely upon profits in exchange and the collection of bills. Some of the banks afford special facilities to reliable exporters by providing credit, retaining lien on the property when purchased.

The Chinese banks are the Bank of China, Bank of Communications, Industrial Bank, Territorial Bank, Hunan Bank, Chung Foo Union Bank, National Commercial Bank, Salt Industrial Bank, Wei Fung Commercial Bank, Wei Tung Bank, Wha Feng Bank, Chung Chuin Yuen Bank, Ningpo Commercial Bank, Teh Sing Bank, and Dei Fong Bank. These banks do nothing in foreign exchange. They advance money to native dealers, usually at a rather high rate of interest, though they allow on time deposits from 4 to 5 per cent, which is in excess of the interest given by foreign banks. The functions of the native banks in relation to the native trade are very much like the functions of similar institutions in the United States that do not transact exchange business.

MANUFACTURING AND OTHER INDUSTRIES.

The last decade has seen the advance of the egg industry to a most important place in the Hankow district; wood-oil plants have developed; engineering plants have grown to keep pace with the demands; a cold-storage plant has been established to export meat products; paper mills have long been important, but this period has seen the introduction of modern machinery; cotton mills have been built; smelting plants have been established, largely as the result of the high prices of antimony; in fact, during 10 years many industries have been initiated, and previously established ones have been strengthened by being modernized. Of the manufacturing plants of this consular district, the Hanyang Iron and Steel Works stands easily first in importance, particularly when it is considered in connection with the improvements being made at Tayeh for the production of different kinds of metal. It may be said to be the premier plant of China.

The Han-Yeh-Ping Co. is erecting a modern industrial city at Wanshihkang, on the Yangtze River, about 75 miles below Hankow, to provide for the expansion of the blast furnaces and other work for 20 years to come. Sanitation, lighting, ventilation, streets, and sewers are all carefully planned.

Other important plants are the Yangtze Engineering Works, the Hankow Iron & Engine Works, the Government Arsenal, the Government Powder Factory, the Government Mint, 2 modern paper factories, 3 cotton mills, 2 antimony smelting mills, 11 oil mills (of which 8 are modern), 1 nail and needle plant, 9 plants manufacturing egg products, 1 large cold-storage plant, 2 ice plants, 6 flour mills, 1 cement works, 2 brick and tile plants, 3 modern aerated-water works, 4 electric light plants, 1 cigarette factory, 1 woolen mill, 1 silk filature, 4 hydraulic presses, 6 tea factories, 1 cask factory and sawmill, 5 candle factories, 2 soap factories, 1 distillery, 1 tannery, and 2 match factories. The foregoing plants use more or less modern machinery, and some of them are under European management and have foreign capital invested in them. Besides these there are a vast number of small works employing antiquated methods for the manufacture of cotton thread and cloth, and of cloth by hand looms from grass and bamboo. Also, timber is sawn by manual labor, matches are turned out from small plants, flax is spun, rope is made, and various other domestic articles are produced by methods that are primitive but are useful in the economic industries of the country. To these might be added a number of other metal-working plants, such as those producing white brass, silversmiths' work, and other articles of small importance.

Outside of the Wuhan cities only small native industries now exist. At Laohokow, for example, are oil presses, looms for silk and cotton weaving; at Laifeng are tile works and an umbrella-manufacturing plant; at a few places are pottery works; at Shihnan is a bamboo plant; at Honanfu are made straw hats, hemp, cotton cloth, and cutlery; at Yokiakow is produced a splendid hand-made cotton cloth used for making flour bags; at Ichang is made blue-thread embroidery; at Lantien the Government has instituted a weaving-dying school, which is still in its infancy. These are small native industries and do not deserve to be considered as an international commercial asset, though they are important to the local community in which each is located.

The following is a list of the principal manufacturing plants, all of which are Chinese except when otherwise indicated:

AERATED-WATER MANUFACTURERS.

Hankow Dispensary (Ltd.), Hankow (British)
Niagara Aerated-Water Factory, Hankow (foreign).
Wilson & Co., Hankow (British).

ANTIMONY SMELTERS.

Carlowitz & Co.'s Antimony Refining Works, Wuchang (German)
Government Antimony Smelting Works, Wuchang.
Panoff's Antimony Smelting Works, Hankow (Russian).
Sino-German Ore Co. (Schwarz, Gaumer & Co.), Hankow (German).

ARSENAL.

Government Arsenal, Hanyang.

BRICK AND TILE WORKS

Hankow Brick and Tile Works, Hankow.
Hanyang Iron and Steel Works, Hanyang.

CANDLE FACTORIES.

Candle factory of the Standard Oil Co., Hankow (American).
Hsieh Yung Mow Candle and Soap Factory, Hankow.
Kwang Hwa Candle Factory, Hankow.
Seng Mow Candle and Soap Factory, Hankow.
Tung Mow Candle and Soap Factory, Hankow.

CEMENT WORKS.

Hua Chi Hupeh Cement Works, Tayeh.

CIGARETTE FACTORY.

British Cigarette Co., Hankow (British).

COLD STORAGE.

International Export Co., Hankow (British).

COTTON MILLS.

Hsing Yeh Cotton Weaving Co., Wuchang.
Hupeh Government Cotton Weaving Mill, Wuchang.
Hupeh No. 1 Weaving & Spinning Co., Wuchang.

DESICCATED-EGG PLANTS.

Anderson, Meyer & Co., Hankow (American).
A. Grosjean & Co., Hankow (French).
Ho Chang, Wuchang.
International Export Co.. Hankow (British).
Lih Tai, Tachimen, Hankow.
Société Anonyme Belge, Hankow (Belgian).
Teh Kang, Hankow, on the Han River.
Tuk Wo Egg Produce Factory, Yencheng, Honan.
Yuen Feng Co., Hankow.

DISTILLERY.

Société Franco-Chinoise Distillerie de Hankow (French).

ELECTRIC LIGHT PLANTS.

Hankow Light & Power Co., Hankow (British).
Hankow Waterworks & Electric Light Co., Hankow.
Kaifeng Electric Light Co., Kaifengfu.
Kwang Ming Electric Light Co., Ichang.
Melchers & Co., Hankow (formerly German; now taken over by Chinese authorities).
Pu Chao Electric Light Co., Shasi.
✓ Tai Shoh Electric Co., Hankow (Japanese).
Wuchang Electric Light Co., Wuchang.

ENGINEERING WORKS.

Fok Chong Engineering Works, Hankow.
Koon Cheong Engineering Works, Hankow.
Yangtze Engineering Works, Hankow.

FLOUR MILLS.

Ah Fung Flour Mill, Hankow.
Chin Loong Flour Mill Co., Hankow.
Hung Feng Flour Mill, Hanyang.
Huo Feng Flour Mill, Hanyang.
Kung Tai Flour Mill, Hankow.
Yu Loong Flour Mill, Hankow.

HYDRAULIC PRESS PACKING FACTORIES.

China & Java Export Co., Hankow (American).
Liddell Brothers & Co., Hankow (British).
Mackenzie & Co., Hankow (British).
✓ Nippon Menkwa Kabushiki Kaisha, Hanyang (Japanese).

ICE WORKS.

Hankow Ice Works, Hankow (British).
Crystal Ice Co., Hankow (foreign).

MATCH FACTORIES.

Set Chong & Co., Hankow.
Shui Hwa Match Factory, Hankow.

MINT.

Government Mint, Wuchang.

NAIL AND NEEDLE FACTORY.

Hanyang Nail and Needle Factory, Hanyang.

OIL MILLS.

Bean and Cottonseed Oil Factory, Hanyang.
Cotton and Bean Oil Pressing Factory, Hanyang.
Fu Ho Oil Mill, Hanyang.
Japan-China Oil Refining Co. (Ltd.), Japanese Concession, Hankow (Japanese). ✓
Mei Sheng, Hankow.
Shung Fong Oil Mill, Hanyang.
Sin Sen Bean Oil Factory, Hanyang.
Tien Shun Oil Mill, Hanyang.
Yu Fung, Hanyang.
Yuen Feng Oil Mill, German Concession, Hankow.
Yung Chang Yuan Oil Mill, Hanyang.

PAPER MILLS.

Government Paper Mill, Seven Mile Creek, Hankow.
Hupeh Paper Mill, Wuchang.

POWDER FACTORY.

Government Powder Factory and Chemical Works, Hanyang.

SAWMILL.

Hankow Sawmill and Woodworking Factory, Hankow (German).

SILK FILATURE.

Wuchang Silk Filature, Wuchang.

SOAP FACTORIES.

Hsien Yung Mow Candle and Soap Factory, Hankow.
Kwang Hwa Candle Factory, Hankow.
Min Hsin Soap Factory, Hankow.
Pao Tai Soap Factory (Burtenshaw & Co.), Hankow (British).
Seng Mow Candle and Soap Factory, Hankow.
Tung Mow Candle and Soap Factory, Hankow.

STEEL FOUNDERS AND MANUFACTURERS.

Hanyang Crucible Steel Factory, Hanyang.
Hanyang Iron and Steel Works, Hanyang.

TANNERY.

Government Leather Factory, Wuchang.

TEA FACTORIES.

Hung Shan Tea Factory, Hankow.
S. W. Litvinoff & Co., Hankow (Russian).
Molchanoff, Pechatnoff & Co., Hankow (Russian).
Nakvasin & Co., Hankow (Russian).
C. & S. Popoff Frères, Hankow (Russian).
Trading Co., Hankow (Russian).

WATERWORKS.

Hankow Waterworks & Electric Light Co., Hankow.

WOOLEN WORKS.

Hupeh Government Wool Factory, Wuchang.

It is reported that one of the largest cotton mills in China is to be erected to the north of Wuchang. It is planned to install 1,000 weaving machines and over 40,000 spinning frames. The machinery is of British and American manufacture. Two thousand workers will be employed, and the promoters are planning to erect 300 dwelling houses to accommodate the spinners and weavers.

There exists a splendid opportunity for the installation in Hankow of a modern up-to-date cold-storage plant for exportation of game, poultry, eggs, pork, and beef. A bean-oil mill for compressing peanuts is worth consideration. A cotton mill could find cheap labor and raw products. In fact, any manufacturing plant using the raw products of China would do well to investigate the potentialities of Hankow before locating elsewhere.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Hankow during the years 1904, 1913, and 1917:[a]

Imports and exports.	1904	1913	1917
Imports of foreign goods:			
From foreign countries and Hongkong	$9,099,140	$25,281,421	$39,695,700
From Chinese ports	28,950,616	21,904,895	22,073,068
Total foreign imports	38,049,756	47,186,316	61,768,768
Reexports of foreign goods:			
To foreign countries and Hongkong	14	18,508	57,952
To Chinese ports	11,672,969	8,058,500	10,615,412
Total foreign reexports	11,672,983	8,077,008	10,673,364
Net total foreign imports	26,376,773	39,109,308	51,095,404
Imports of Chinese products	22,172,166	21,411,535	43,244,232
Reexports of Chinese products:			
To foreign countries and Hongkong	1,188,320	2,469,082	2,567,807
To Chinese ports	15,861,948	5,243,607	17,136,511
Total Chinese reexports	17,050,268	7,712,689	19,704,318
Net total Chinese imports	5,121,898	13,698,846	23,539,914
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	3,883,827	9,967,994	11,221,391
To Chinese ports	40,906,558	51,206,006	98,531,762
Total exports of local origin	44,790,385	61,174,000	109,753,153
Gross value of the trade of the port	105,012,307	129,771,851	214,766,153
Net value of the trade of the port	76,289,056	113,982,154	184,388,471

EXPORT TRADE.

Statistics are useful in showing the development of an interior port, but they do not adequately represent the growth of the place, for reasons that are apparent. The Maritime Customs Returns do not reflect the importance of Hankow as a port of export. It is the premier port for handling the raw products of China, and this has, during the past few years, been recognized more than ever. The exports (including reexports) from Hankow in 1904 were $61,840,653, in 1913, $68,886,689, and in 1918, $138,338,432.

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[a] EDITOR'S NOTE.—The year 1917 is the latest for which it is possible to obtain this summary of values. In the sections on "Export trade" and "Import trade," however, the reader will find 1918 figures.

Hankow's position makes it the natural storehouse for all the products of Hupeh, southern Honan, Hunan, Shensi, Kansu, and Szechwan. A glance at the map is sufficient to convince anyone of this, when it is realized that the Han, the Yangtze, and their tributaries are navigable for small junks at some season each year. These streams carry down junks and barges of all sizes and descriptions, laden with the products of the various sections, and it often happens that the barges are sold for timber or lumber at Hankow.

Not only does nature indicate the junction of these streams as the favorable place for collecting the products, but every railway built or contemplated for central China has one terminus at the Wuhan cities. The mind of the engineer has recognized the intention of nature and is augmenting the natural facilities by constructing railways to Hankow. The opening of the Peking-Hankow Railway did much to bring to the port the products from parts of Honan not previously reached, but the Canton-Hankow and Hankow-Ichang Railways are simply auxiliaries to the natural freight carriers, and the proposed lines to the west will be the same; they will all be sound investments.

No one can study the map without being impressed with the importance of Hankow as the place to find the products of central and western China, and no one can leave the place after a thorough study without an absolute conviction of the accuracy of his first impression that Hankow is primarily a port of export, and as such is the premier port in China.

The conditions handicapping export trade are to be found in human attempts to contradict nature or the failure of man to supply the facilities to hasten exchange of oversea export trade. They consist, in part, of the absence of adequate purchasing agents acting independently of Shanghai; the failure of banks to assist the development of the trade by advances equal to those that would be made if the cargo were at a seaport; the high rents; the high cost of living; and, for America, the absence of adequate American bottoms across the Pacific, and the total absence of American vessels on the river to act as feeders to the ocean-going ships. The establishment of American river steamers is almost as essential as are the ocean-going steamers. Foreign banks are numerous and there are indications that the Europeans are extending greater aid in the way of credits than formerly. The general shipping facilities are good for everyone but Americans. The following table furnishes a comparative statement of the principal exports (including reexports) for the years 1904, 1913, and 1918:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Albumen............pounds..	700,000	$93,218	1,629,866	$437,511	6,813,600	$3,213,124
Antimony..............do....	14,335,000	409,159	18,137,200	395,061	11,716,800	890,095
Beans...................do....	355,811,000	5,192,129	235,181,067	2,846,064	142,617,333	2,367,601
Bean cake..............do....	71,133,000	303,036	308,667,067	3,117,846	158,417,333	1,998,589
Bones...................do....	6,421,000	23,933	14,542,667	101,017	9,107,200	94,910
Bran.....................do....	2,317,000	23,638	28,683,600	208,703	16,482,400	166,653
Bristles.................do....	2,646,000	750,242	1,855.600	741,781	2,785,333	2,323,465
Chestnuts..............do....	18,000	4,025	749,600	8,903	649,467	19,176
Chickens, frozen......number..	....	....	816,375	79,019	....	....
Cigarettes............pounds..	....	....	4,206,133	971,920	3,042,667	1,411,659
Coke.....................do....	16,658,000	52,802	18.939,200	59,188	....	....

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Cotton, raw............pounds..	54,719,000	$5,244,886	29,916,800	$3,884,834	144,428,533	$35,111,665
Eggs, fresh............number..	34,590,000	83,125	26,888,194	110,828	14,554,500	103,834
Eggs, frozen............pounds..	....	....	10,326,000	448,924	2,195,733	188,605
Egg yolk..................do....	....	....	8,548,934	346,830	9,420,267	2,498,466
Flour.....................do....	112,000	3,387	42,478,267	912,370	21,048,133	916,869
Gallnuts..................do....	....	....	5,938,800	648,608	5,389,467	1,087,764
Groundnuts:						
In shell..............do....	12,135,000	148,624	3,552,800	56,394	1,082,400	23,436
Kernels...............do....			10,278,800	327,216	11,477,200	462,219
Hair, human...............do....	....	....	300,000	75,898	190,400	41,748
Hemp......................do....	22,471,000	1,316,242	70,667	6,149	2,928,533	242,019
Hides:						
Ass...................do....	193,000	47,389	72,000	21,116	76,800	30,682
Buffalo...............do....	3,712,000	393,949	5,587,333	630,038	2,378,000	414,201
Cow...................do....	20,389,000	3,173,514	28,946,667	6,070,355	21,119,867	6,863,569
Intestines, pig...........do....	6,000	3,376	410,667	91,416	123,733	56,294
Iron and mild steel:						
Rails............long tons..	....	....	10,299	411,558	661	35,881
All other.............do....	....	....	3,464	172,678	12,570	856,456
Iron ore..................do....	38,000	61,148	269,567	451,056	320,850	1,350,427
Iron, pig.................do....	14,000	221,143	71,959	1,100,450	119,459	14,221,724
Lily flowers............pounds..	540,000	21,795	1,794,967	87,074	498,800	52,839
Oils:						
Bean..................do....	1,503,000	58,438	989,600	50,936	6,432,400	593,381
Sesame seed...........do....	6,078,000	268,638	288,133	15,043	3,198,800	239,076
Wood and nut..........do....	56,654,000	2,313,466	99,809,733	4,678,424	82,772,933	9,295,050
Tea...................do....	2,694,000	129,103	895,733	55,081	1,636,267	148,864
Quicksilver...............do....	47,000	22,180	43,333	....	379,733	662,806
Ramie.....................do....	....	....	25,103,333	2,040,790	25,043,333	2,787,595
Seeds:						
Rape..................do....	14,822,000	132,360	118,933	2,155	18,844,133	414,801
Sesame................do....	82,355,000	1,754,192	185,392,400	6,079,561	18,381,467	768,065
Seed cake.................do....	19,139,000	81,700	26,450,400	156,488	26,648,533	306,477
Silk cocoons, refuse, and waste ....pounds..	3,193,000	528,650	656,533	118,729	2,796,800	747,316
Silk:						
Honan pongee..........do....	112,000	172,113	543,867	1,037,872	466,133	1,100,519
Raw, yellow...........do....	1,168,000	2,631,050	915,833	998,536	890,133	2,247,338
Silk products not otherwise classified............pounds..	444,000	831,956	....	298,639	68,800	127,062
Skins:						
Kid and goat.......pieces..	3,109,000	1,309,866	2,057,925	1,039,292	2,933,709	2,819,188
Sheep.................do....	104,000	67,081	100,139	55,926	150,364	223,433
Tallow:						
Animal...........pounds..	2,389,000	118,081	7,180,133	452,082	6,846,533	776,490
Vegetable.............do....	25,828,000	1,392,190	33,216,267	1,914,653	29,552,667	3,685,566
Tea.......................do....	120,767,000	9,868,058	117,762,267	11,977,349	55,789,200	6,477,113
Tin.......................do....	13,000	2,523	210,533	32,309	589,200	33,298
Tobacco...................do....	21,389,000	1,171,323	23,047,867	2,807,504	19,727,734	2,588,630
Walnuts...................do....	1,400,000	51,449	873,600	34,193	1,513,733	88,406
Wheat.....................do....	59,097,000	566,394	28,228,000	419,007	312,845,200	5,718,421
Wool, sheep's.............do....	4,062,000	408,241	268,000	15,021	1,524,400	240,183
All other articles...............	....	20,390,841	....	9,696,294	....	19,155,364
Total......................	....	61,840,653	....	68,886,689	....	138,338,432

It will be observed from the above table that the chief articles of export from Hankow during 1918, in the order of their relative value, were: Cotton, raw, $35,111,665; iron, pig, $14,221,724; oil, wood and nut, $9,295,050; hides, cow, $6,863,569; tea, $6,477,113; wheat, $5,718,421; tallow, vegetable, $3,685,566; skins, kid and goat, $2,819,188; ramie, $2,787,595; beans, $2,367,601; bristles, $2,323,465; silk, raw, yellow, $2,247,338; egg yolk, dried, $2,246,582; bean cake, $1,998,589; albumen, dried, $1,922,922; cigarettes, $1,411,659; tobacco, prepared, $1,401,799; iron ore, $1,350,427; albumen, liquid, $1,264,100; tobacco, leaf, $1,186,831; silk, Honan pongee, $1,100,519; gallnuts, $1,087,764.

Very little green tea is exported from this consular district, but four-fifths of China's total export of black tea is originally from

Hankow and Kiukiang, while nine-tenths of the brick tea is from this district. The antimony appearing in the above statement does not originate entirely in this consular district, as the greater part is from Hunan. Wood oil is derived chiefly from Hupeh, though small quantities originate in the Province of Szechwan, and the same is true in regard to bristles.

The following table covers the principal articles in this consular district, and the heading to each column explains the data:

Articles.	Period of market.	Date for report from consulate general reviewing trade.
Tea, black	May 15–October or later	Preliminary July, final January.
Cotton	October–April	July following.
Sesame seed	September–February	March.
Wood oil	October	Annual report.
Tallow:		
Vegetable	November–March	September–October.
Animal	do	Do.
Hides:		
Winter	November–May	October.
Summer	May–October	Do.
Goatskins	November–May	Annual report.
Bristles	All year	Do.
Gallnuts	June–June	Do.

Tea is exported to Russian Asia, Hongkong, European Russia, Great Britain, and the United States in the order named. This trade is largely in the hands of Russians. Of the raw cotton, about 66 per cent is taken by Japanese and 12 per cent by the United States, though prior to the European war Germany was a purchaser. Before the war Germany bought one-third of the sesame seeds and the Netherlands as much, but now Great Britain and Italy are the largest purchasers, in about equal quantities, followed by Denmark, Japan, and France. The United States purchases three-fourths of the wood-oil output. Animal tallow is sold to Japan, Russia, and France, in the order named, while vegetable tallow goes to Great Britain, the United States, and Italy, which take about one-third, one-fourth, and one-sixth, respectively. The shipments to the United States have trebled since the outbreak of the war. Before 1914 cow and buffalo hides went to France, Germany, Hongkong, Italy, and Belgium, but in 1915 one-third went to the United States and the next largest purchasers were Japan, Italy, and Hongkong. The United States has long been the largest buyer of goatskins, and it continues to take two-thirds; Germany and Belgium, however, have disappeared as buyers and Great Britain took only two-thirds as many in 1915 as it purchased two years before. Germany, the Netherlands, and Belgium formerly used in their tanneries and dye houses two-thirds of the gallnuts, but this article now goes to the United States and Japan in greatly increased quantities, while the first three countries have disappeared from the customs returns.

The following table shows, by quantity and value, the articles declared at the Hankow consulate general for exportation to the United States during the calendar years 1917 and 1918:

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
Antimony:				
Crude....tons..	1,470	$247,653	830	$117,729
Regulus....do..	1,940	589,836	375	89,066
Sulphate....do..	300	51,955		
Bones, animal....pounds..	1,146,230	58,474	1,344	1,080
Bristles....do....	507,019	540,396	654,408	882,599
Camphor, crude....do....	2,299	1,290		
Carbonate of potash, calcined....do....			32,487	8,843
Casings:				
Goat....do....	127	83		
Pig....do....	46,936	19,793	69,979	36,799
Cotton belting....		211		1,974
Cotton, raw....pounds..	2,682,763	722,102	2,771,301	607,452
Egg products:				
Albumen, dry....do....	595,600	535,098	239,000	222,567
Eggs, whole—				
Dry....do....	859,518	331,133		
Frozen....do....	83,120	6,998		
Yolk—				
Dry....do....	4,402,045	1,788,838	2,747,650	1,443,960
Liquid....do....	6,460	778		
Embroidery....		200		505
Fiber:				
Hemp....tons..	121	32,642		
Jute....pounds..	18,365	1,560		
Ramie....do....	2,337,489	175,420	418,830	73,455
Gallnuts....do....	2,891,662	603,825	1,298,683	587,421
Gallnut extract....do....	33,600	16,115		
Glue....do....	9,595	1,385		
Hair, human....do....	10,055	3,952		
Hides:				
Buffalo....pieces..	61,611	453,722	7,934	90,888
Cow....do...	1,143,898	7,150,546	76,175	408,616
Intestines, pig....pounds..	27,732	10,101		
Oils:				
Bean....gallons..	312,399	279,437	716,092	994,575
Cottonseed....pounds..	1,135,451	126,508	1,971,042	314,826
Rapeseed....do....	37,809	6,652		
Sesame seed....do....	7,278	938	252,788	82,741
Tea seed....do....			362,346	72,454
Wood and nut....gallons..	5,395,368	4,661,559	4,533,613	6,495,322
Ore, tungsten....		11,850		16,407
Peas, white....pounds..	874,328	80,580	541,344	27,994
Personal effects....		1,310		2,000
Pork:				
Tenderloin....pounds..	21,252	2,099		
Trimmings....do....	40,100	1,975		
Seeds, sesame....do....	967,200	74,369	538,812	46.495
Skins:				
Deer....pieces..	25,461	29,470	14,076	16,001
Fox....do...	25	718		
Goat....do...	1,659,868	2,646,565	1,561,647	1,989,342
Leopard....do...	27	737		
Otter....do...	2	38		
Sheep....do...	4,442	6,088	3,027	2,847
Squirrel....do...	2	6		
Tiger....do...	15	1,599	1	185
Tallow:				
Animal....pounds..	1,262,739	202,848	201,983	33,182
Vegetable....do....	10,551,833	1,404,896	8,491,642	1,339,693
Tea....do....	1,648,293	418,072	237,887	70,206
Tin....do....	20,426	12,965		
Tobacco leaf....do....			1,730,625	565,328
Turmeric....do....	16,933	830		
Wool, sheep....do....	179,037	52,991	3,324	913
All other articles....		677		
Total....		23,369,883		16,508,465

During the first six months of 1919 the direct exports from Hankow to the United States totaled $10,393,860.

In order to afford a basis of comparison with prewar conditions, the following table is given, showing the value of the declared exports from Hankow to the United States during 1913, the last normal year before the outbreak of hostilities:

Articles.	Value, 1913.	Articles.	Value, 1913.	Articles.	Value, 1913.
Albumen	$30,000	Feathers	$8,091	Sesame seed	$1,111
Antimony:		Gallnuts	94,350	Skins:	
Crude	60,782	Hides:		Cat	960
Regulus	105,355	Buffalo	36,026	Goat	465,472
Ore (stibnite)	2,697	Cow	1,425,317	Weasel	1,104
Bristles	156,937	Iron, pig	57,787	Tallow, vegetable	167,033
China grass	12,320	Oil:		Tea	288,774
Coal, anthracite	5,251	Cottonseed	7,619	All other articles	4,986
Cotton	1,031	Tea seed	358		
Egg yolk, frozen	10,353	Wood and nut	2,208,024	Total	5,151,798

IMPORT TRADE.

The net total import trade in 1904 was $26,376,773, in 1913 $39,109,308, and in 1918, $51,797,626.

This shows a gratifying increase in trade in a large variety of articles. The increase is due to internal developments in railways and manufacturing rather than any considerable change in the demands of the people. Advances have been made in the area of distribution; firms have pushed their agencies for the sale of certain products into remoter places, with the result that there is a very great increase in the demand for petroleum, sewing machines, and many articles of Japanese make, Japan having pushed its agencies farther inland than any other nation. The increased demand is due to development, extension of agencies, increased facilities for distribution, and in some degree to increased native demands. Shipping facilities are covered in the next section of this report, and the finance and credit system in previous ones. The comprador system is universal and is essential even though the foreigner is proficient in the language.

Many imports are covered by transit passes, except where the articles are sold from a local godown. Articles universally used, like kerosene, are delivered by agents and are covered by transit pass to the consumer. The local tax, known as likin, is a very great detriment to China, forming an obstacle to the development of trade; one never knows what an article will cost before it is eventually delivered to a remote point, as it must pass numerous tax stations. It is to be hoped that China, with the assistance of the foreign powers, will discontinue these imposts in the near future.

The following table shows the quantity and value of the net principal imports into Hankow for 1904, 1913, and 1918:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Automobiles, and parts				$17,480		$46,518
Bags:						
Cotton and canvas ... number			258,528	41,640		
Gunny ... do	3,888,000	$270,126	2,651,963	231,535	2,533,732	287,191
Bedsteads ... do				28,416	1,425	25,305
Beer and porter ... dozen quarts		32,775	52,774	67,001	39,381	89,099
Belting		41,423		42,834		49,962
Bicycles				2,721		8,137
Boots and shoes, leather and canvas ... pairs	4,000	4,224	8,386	6,941	789	4,430
Bottles, empty				9,571		14,088
Brass and yellow metal ... pounds	285,000	37,823	197,866	30,617	394,133	139,183
Bridge-construction material				4,256		47,720

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Buttons....................gross..	431,000	$122,610	217,576	$69,102	131,032	$54,567
Candles and candle-making material (stearine).....pounds..	199,000	19,556		72,642	968,933	151,192
Caps and hats, foreign.number..			477,403	145,396	118,956	46,929
Carbon, black.........pounds..			146,400	16,235	58,000	15,361
Cardamoms..............do....	221,000	64,042	241,600	33,134	274,133	78,814
Carriages, cars, wagons, and parts of		1,866		310,489		251,022
Casks, empty.........number..		51,216		52,100	12,497	56,404
Chests and fittings, tea........				28,538		24,035
Cigarettes...............mille..		61,489	552,399	825,970	834,672	2,571,497
Cigars....................do....		9,591	6,805	58,918	1,511	27,039
Clocks...............number..	27,000	38,042	36,584	38,129	23,152	44,891
Clothing........................		12,521		30,220		
Coal.....................tons..	85,000	321,757	143,554	531,216	86,944	1,192,828
Copper, ingots, bars, sheets, wire, etc............pounds..	14,326,000	2,330,235	14,129,467	2,399,041	4,016,800	1,269,608
Cotton goods:						
Blankets...........pieces..	21,000	6,980	26,003	11,144	35,433	34,050
Drills—						
American........do....	130,000	350,388	48,994	137,258	87	616
British..........do....	27,000	59,694	880	2,539	350	2,626
Japanese.........do....	19,000	43,430	278,748	779,874	86,022	471,784
All other........do....	13,000	31,427				
Dyed cottons, n.e.s..do....	347,000	900,043		1,257,556	316,593	2,657,413
Flannels, plain, dyed, and printed—						
American......pieces..	34,000	91,595	30,732	75,730	325	1,554
All other........do....	13,000	31,575	5,498	13,664	35,221	197,068
Handkershiefs......dozen..	70,000	22,894	53,407	11,508	116,672	69,175
Italians, plain fast black ....pieces..	192,000	744,437	247,089	846,576	121,430	983,640
Jeans—						
American........do....	5,000	11,525				
Dutch...........do....	2,000	5,905	7,600	15,412		
English..........do....	42,000	84,023	219,142	468,680	16,865	90,151
Japanese.........do....			1,530	4,093	215,785	1,069,048
Lawns..............do....	7,000	5,202	32,398	18,701	25,638	152,386
Sheetings, gray, plain—						
American........do....	70,000	152,490	12,630	40,406	78	457
English..........do....	69,000	165,864	50,408	152,601	2,237	16,565
Japanese.........do....	4,000	7,237	9,130	23,592	45,670	254,197
Shirtings, gray, plain—						
American........do....			2,140	5,218	240	966
English..........do....			572,521	1,321,639	84,729	488,307
Japanese.........do....			810	1,959	228,327	1,223,047
Shirtings, white, plain—						
American........do....	190	674	30			
Dutch...........do....	20,000	56,421	41,617		4,125	24,557
English..........do....	510,000	1,414,535	595,834		251,513	1,758,036
Japanese.........do....			850		45,516	323,088
T-cloths—						
English..........do....	85,000	115,594	84,130	154,021	23,312	114,892
All other........do....	2,000	3,295		2,800,798	30,060	100,339
Thread—						
Balls..........pounds..			6,400	2,991	36,400	28,509
Spools...........gross..	9,000	17,555	21,358	29,358	8,176	35,139
Towels.............dozen..	48,000	16,986	237,939	76,253	232,565	212,201
Velvets, velveteens, velvet cords, and corduroys ....yards..	454,000	70,229	654,143	134,766	252,464	123,949
Yarn.............pounds..	38,924,000	5,148,766	38,032,400	5,328,939	11,618,267	5,027,695
Miscellaneous cotton goods.		408,554		341,512		736,808
Miscellaneous piece goods.......		409,964		118,621		286,521
Covers, bed (including cotton quilts)..............pieces..			111,241	30,210	34,600	37,793
Crucibles.......................		52,165		48,631		87,693
Drapery........................						54,944
Dyes, colors, etc.:						
Aniline........................		290,601		502,967		146,362
Indigo (all kinds).pounds..			7,336,400	1,165,492	70,000	72,944
All other....................		5,987		54,160		134,854
Electrical materials and fittings.		13,497		144,001		313,137
Emery cloth, sandpaper, emery powder, etc.		6,394		2,472		8,096
Enameled ironware..............		3,334		85,445		95,609
Engine and boiler fittings......				139,382		117,416
Files..........................		1,966		9,223		12,797
Flour..................pounds..	1,765,000	35,254	524,533	14,400	181,333	7,929
Fruits and vegetables, canned..				14,552		62,548
Garters, braces, suspenders, etc.						536,273
Ginseng:						
American.........pounds..	9,000	55,886	7,638	80,993	15,555	276,972
Japanese.............do....	8,000	9,029	9,673	16,256	15,264	34,562
Other.................do....	4,000	52,571	67	3,018	1,467	97,110

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Glass, window............boxes..	17,000	$48,706	53,819	$139,790	10,609	$115,933
Gloves............dozen pairs..			28,326	8,123	64,614	40,285
Graphophones and accessories..				7,181		7,444
Haberdashery and millinery...		15,389		53,803		50,459
Hardware		32,451		46,169		31,861
Hats, summer and straw, number	2,000	255	389,289	54,781	65,520	25,407
Hosiery (including cotton socks) dozen pairs			31,550	8,464	354,515	322,182
Instruments:						
Musical, pianos and organs				6,385		4,809
All other		24,026		28,227		
Iron and mild steel, new:						
Bars..............pounds..	1,545,000	23,092	5,213,333	87,294	4,169,600	298,088
Cobbles and wire shorts. pounds	1,398,000	19,357	6,872,267	93,445	732,133	27,186
Hoops............pounds..	103,000	21,950	3,647,333	79,554	3,599,333	284,369
Nails................do....	4,843,000	93,157	8,403,200	190,209	3,291,867	260,877
Pipes and tubes, wrought, pounds	135,000	3,002	247,067	9,444	632,400	43,104
Plate cuttings.....pounds..	618,000	7,249	4,050,400	49,681	87,067	3,895
Rails................do....			16,688,800	281,697	1,638,267	51,466
Screws..............do....	11,000	963	918,800	37,915	46,133	7,963
Sheets and plates....do....	898,000	14,118	2,693,467	51,574	738,533	87,292
Wire.................do....	811,000	21,595	1,152,533	29,168	304,400	24,158
All other............do....	383,000	9,478	4,430,400	117,198	2,982,800	220,920
Iron and mild steel, old..do....	2,289,000	23,107	2,612,667	28,776	1,269,867	41,915
Iron, galvanized:						
Bolts, rivets, screws, tubes, ropes, etc.......pounds..			95,200	2,092	166,933	20,225
Corrugated sheets....do....	391,000	11,461	2,064,533	65,312	135,867	30,793
Flat sheets...........do....	590,000	17,617	2,213,067	82,170	878,400	199,079
Wire.................do....	288,000	7,668	591,467	17,366	755,200	71,423
Wire shorts..........do....	661,000	8,096	3,802,800	52,342	1,019,333	52,716
Lamps and lampware		36,469		124,686		97,589
Lead.................pounds..	4,086,000	124,278	751,167	30,353	801,733	75,162
Leather		49,548		57,547		330,856
Locomotives				59,194		24,113
Lumber and timber:						
Hardwood......cubic feet..	177,000	52,601	182,648	44,197	78,322	43,916
Softwood......square feet..	4,306,000	89,315	20,780,124	367,518	4,036,782	173,370
Sleepers..........number..	31,000	15,378	399,450	250,512	338,984	312,686
Machine tools				10,125		4,211
Machinery		485,274		348,751		138,443
Matches, Japanese.......gross..	172,000	25,088	1,317,255	264,848	62,064	20,200
Match-making materials, pounds	7,363,000	110,737	4,177,067	72,433	9,122,267	401,301
Medicines, foreign and Hongkong		95,010		180,373		306,960
Metal, antifriction (including Babbitt, magnolia, etc., metals)..................pounds..			26,800	5,744	7,067	2,957
Metal, white.............do....	78,000	19,969	77,467	22,397	5,333	6,797
Milk, condensed, in cans.dozen.	8,000	9,007	21,720	26,038	22,852	49,774
Mining requisites						60,978
Motor cycles, and parts of				17,480		
Munitions				221,395		33,490
Needles.................mille..	716,000	103,280	1,113,850	167,742	364,326	402,042
Nickel...............pounds..	90,000	35,654	83,200	29,775		
Oils:						
Kerosene—						
American.....gallons..	4,076,000	571,369	14,482,124	1,200,279	3,203,918	993,792
Borneo and Sumatra, gallons	10,378,000	1,213,037	10,724,403	1,190,539	4,529,388	1,336,222
Lubricating.......gallons..	51,000	12,855	285,969	66,105	449,148	168,252
Opium...............pounds..	2,037,000	124,620	215	2,812		
Paints..................do....	99,000	4,607	502,000	32,128	231,467	30,217
Paper		95,302		244,869		
Paper-making material, pounds			845,333	19,326	56,000	3,707
Pepper:						
Black.............pounds..	1,291,000	137,512	1,360,533	133,728	1,727,867	316,004
White...............do....	88,000	16,550	28,533	4,364	29,733	6,677
Photographic materials		6,921		20,693		
Printing and lithographic materials		2,730		10,301		3,802
Printing ink..........pounds..			46,000	5,192	61,600	19,720
Provisions and household stores, n. e. s		85,447		189,098		190,890
Pumps				20,147		21,887
Railway plant material		1,480,303		54,660		215,366
Recreation requisites				2,459		6,556

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Rope, Manila..........pounds..	83,000	$8,941	74,933	$6,798	88,267	$16,002
Rubber and rubber goods......				16,079		5,488
Safes........				13,680		14,386
Scales........				5,072		7,095
Seawoods.............pounds..	19,849,000	323,330	15,856,533	241,862	18,580,133	461,933
Sewing and knitting machines..				24,709	413	11,613
Shooks, staves, etc..........				382,922		338,171
Soap:						
Bar...............pounds..	1,092,000	32,575	2,394,400	117,607	1,872,667	181,445
Fancy and toilet..........		25,316		66,542		147,805
Spirits (not including alcohol)..		15,108		3,178		87,991
Stationery..........		14,505		67,215		51,499
Steel:						
Bamboo..........pounds..	417,000	11,125	1,720,933	34,986	97,200	20,681
Bars..................do....	146,000	6,964	344,400	8,907	238,533	27,340
Tool and cast........do....	194,000	59,346		17,941	493,200	89,627
Wire netting and gauze, pounds..................	31,000	2,656		1,021	123,467	41,959
All other..........pounds..	274,000	18,955		7,144	129,733	12,655
Stoves and grates..........				19,989		9,335
Sugar.................pounds..	36,473,000	950,919	104,530,133	2,910,628	170,172,800	10,463,277
Tar.................gallons..			66,800	7,592	61,790	9,694
Tea:						
Dust..............pounds..	1,717,000	182,881	20,764,000	3,029,707	1,587,867	239,996
All other............do....	1,000	369			7,333	1,489
Telegraphic materials..........		20,788		29,404		11,633
Tin..................pounds..	389,000	90,122	290,133	43,824	25,100	12,257
Tin plates...............do....	4,785,000	156,221	11,923,600	444,615	3,017,733	317,059
Tobacco, leaf and prepared, pounds..........			405,467	69,858	238,933	34,012
Tobacconists' sundries..........				3,494		3,536
Toilet requisites..........		1,428		42,790		10,575
Tooth powder and paste..........						32,730
Typewriters and accessories....				9,725		11,478
Umbrellas, cotton, Japanese, number..........	344,000	97,762	500,924	143,402	555,030	276,116
Underwears............dozen..			3,668	16,680	18,994	97,180
Varnish..........		2,893		12,175		1,855
Watches.............number..	2,000	7,832	3,357	4,398		
Water, table, bottled, dozen quarts..........		9,648		25,389	19,578	36,437
Wine (not including sake).....		49,960		181,513		63,727
Woolen goods..........		521,587		309,841		147,599
Wool and cotton mixtures.....		111,633		86,635		185,089
Zinc.................pounds..	224,000	14,390	2,524,600	194,631	617,200	94,476
All other articles..........		3,910,059		1,800,753		5,022,956
Total..........		26,376,773		39,109,308		51,797,626

Where an item does not appear in the above table for each year, it is because it is not in the Maritime Customs Returns for that year.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

Steamship companies operating out of Hankow are:

Name of company.	Between Hankow and--	Frequency of service.
China Navigation Co..........	Shanghai..........	Five days per week.
	Ichang..........	Irregularly; usually weekly.
	Changsha..........	Tuesdays and Fridays during high-water season.
Indo-China Steam Navigation Co..........	Shanghai..........	Three days per week.
	Ichang..........	Irregularly; usually weekly.
	Changsha..........	Weekly in season.
Hong On Steamship Co..........	Shanghai..........	Weekly.
Ningpo-Shaohsing Steam Navigation Co....	.....do..........	Irregularly.
Nippon Kisen Kaisha..........	....do..........	Six days per week.
	Ichang..........	Two days per week.
	Changsha..........	Two days per week in season.
China Merchants Steam Navigation Co......	Shanghai..........	Four days per week.
	Ichang..........	One day per week.

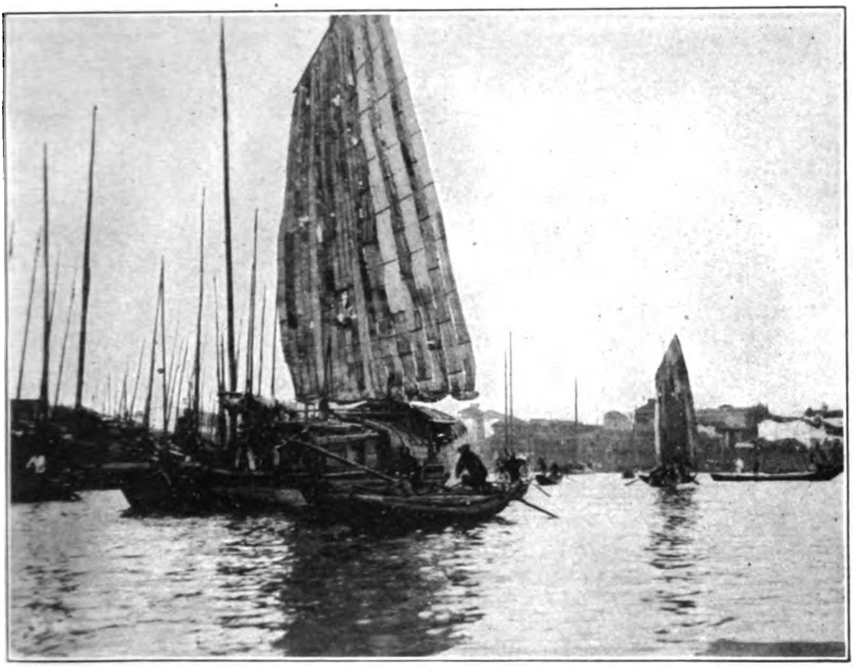


FIG. 13.—CHINESE JUNK ON THE HAN RIVER, HANKOW.

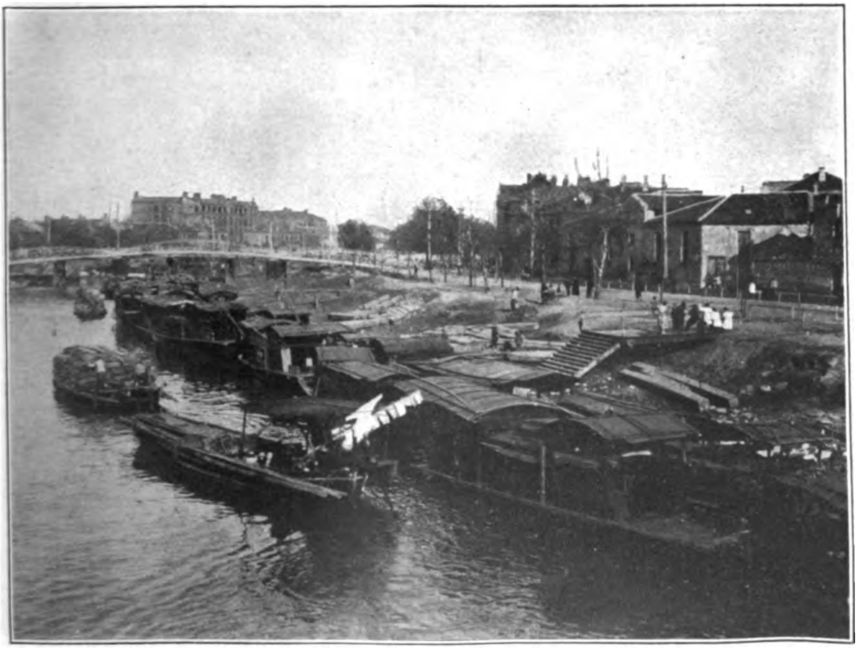
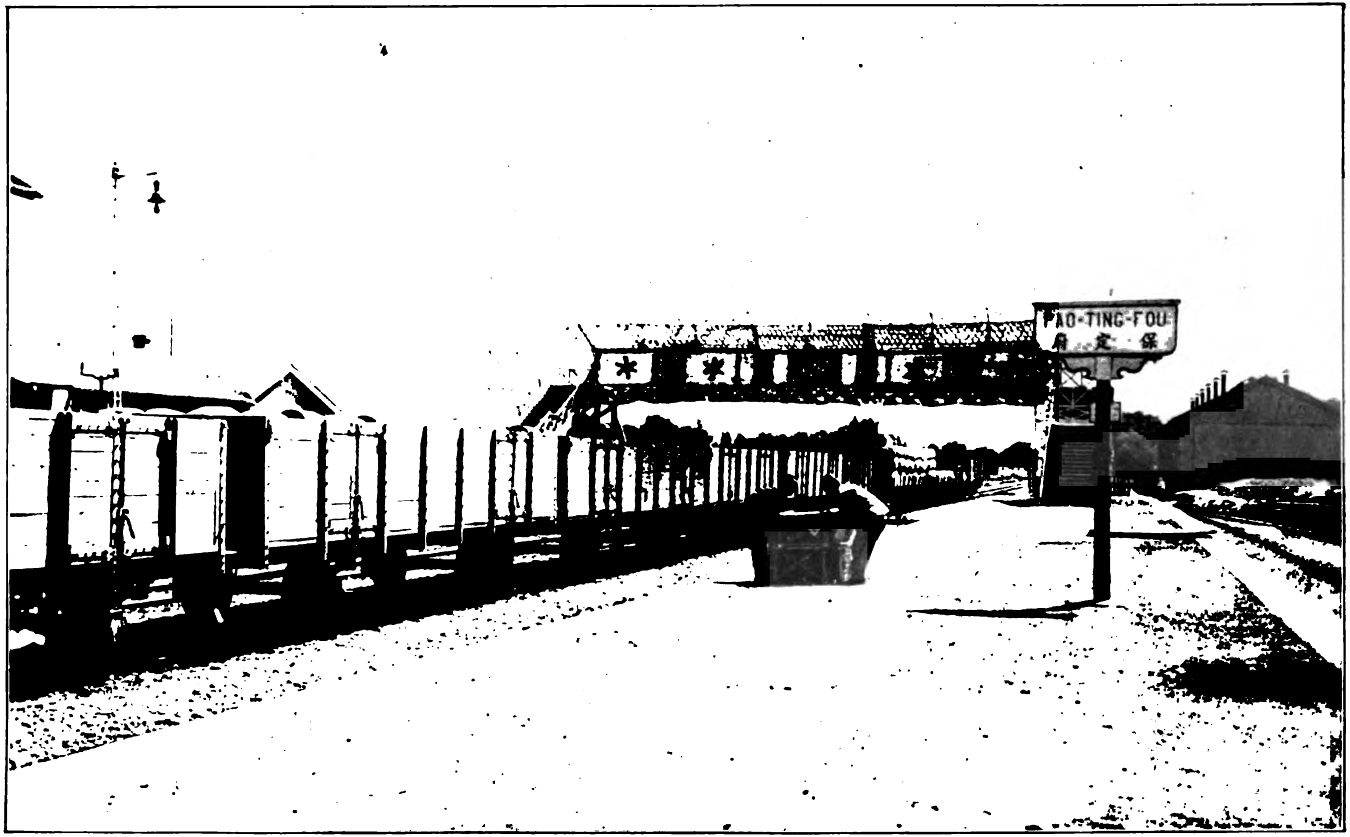


FIG. 14.—PART OF THE FLOATING POPULATION ON SOOCHOW CREEK, SHANGHAI.



Photograph by E. M. Newman.

FIG. 15.—FREIGHT TRAIN ON PEKING-HANKOW RAILWAY.

Tow boats with lighters from Hankow to Changteh are maintained during high water when freight offers.

The European war has not materially affected the river service. It has reduced the steamers of British companies, but the Japanese steamers have provided increased service.

There are no express companies located in Hankow. All shipping firms act as forwarding agents.

There are no mechanical appliances on the wharves for handling cargo. If such equipment is indispensable the vessel must provide it, but the useful coolie is capable of handling surprisingly heavy weights. It is not an uncommon thing to see heavy pieces of machinery, boilers, etc., discharged by the coolies; the work is not expeditiously done, but the coolies accomplish it in some inexplicable manner. The port charges upon vessels, such as harbor dues, etc., are included in the tonnage dues, which are payable once every four months, entitling a vessel to call at any port in China without payment of further dues. The tonnage dues on vessels up to 160 tons are 1 mace per ton, and if over this, 4 mace per ton.

Ocean-going vessels come to Hankow during nine months in the year, but this service is irregular and is per arrangement. Among the vessels arriving from America are those belonging to the Standard Oil Co. of New York, the Robert Dollar Co., and the Garland Steamship Co.

FACILITIES FOR TRAVEL.

The river steamers furnish admirable facilities for travel on the Yangtze. The railways, where they exist, furnish fair accommodations; elsewhere chairs must be used.

Except in Hankow, Kiukiang, and Kuling, there are only native hotels or inns. The following are the European hotels at the places indicated:

Name.	Number of bedrooms.	Number of baths.	Rate per day.
			Mex. dol.
Wagon Lits Terminus Hotel, Hankow	60	30	7
Hankow Hotel, Hankow	14	5	4
International Boarding House, Hankow	5	2	4
Duff Hotel, Kiukiang	....	....	4
Fairy Glen, Kuling	....	Over 40	6

Four lines of steamers maintain a splendid river service between Hankow and Shanghai (70 hours), and practically every night one or more steamers sail. The fare down the river is $50 Mex., while that for the return trip is $75 Mex. The year round small steamers ply weekly from Hankow to Ichang (90 hours), the fare being $45 Mex. During high water—approximately nine months per annum—service is maintained to Changsha (48 hours), the fare being $30 Mex. There is daily railway service to Peking, the fare, with sleeper, being $49.50 Mex.

The best season to visit Hankow as a tourist would be the autumn or spring, avoiding the extreme heat from June to September and the inclement winter season. If the trip is for business it should be at the season when the exports are in market or during any time except from June to September.

TRADE ORGANIZATIONS IN DISTRICT.

The following trade organizations exist in the Wuhan cities, and it may be stated that in practically every recognized center of trade there is a Chinese chamber of commerce in addition to those here indicated as existing in Hankow:

British Hankow Chamber of Commerce, C. A. Fraser, chairman,

Hankow General Chamber of Commerce (Chinese), Yu Ching Tsen, chairman.

Wuchang Chamber of Commerce (Chinese).

The Chinese guilds embrace the following organizations, industries, and activities: Banks; financiers; native banks (opened by Hankow natives); Shao-hsing banks; Kiangsi banks; Anhwei banks; foreign companies; mines and mining companies; insurance companies; metals; tea industry; tea-leaf shops; Changsha paper, tea, and grocery shops; Hui salt; oil shops; yellow-silk and wood-oil shops; kerosene oil; pawn shops; clothing industry; silks; piece goods; native cotton cloth (Kingkow and Yokow); cotton yarn; cotton shops; cotton purchasing and selling agents; silk industry; white cotton cloth shops; grass-cloth and hemp shops; native velvet; Canton and Chaochow; Szechwan; Taiping; Fukien; Kiangsi agents; Kien-chang, Kiangsi; Fuchow, Kiangsi; Tang Hui (drugs); Huangchow; Chun Hsu; old silversmith shops (Chekiang); new silversmith shops (Chekiang); native silversmith shops; Inner River cereal shops; Outer River cereal shops; Chekiang-Ningpo cereal shops; native cereal shops; marine delicacies; Canton and Fukien grocery shops; Hsien-ning grocery shops; Hanyang grocery shops; Kiangsu groceries and sweetmeats; rice grinders; Shao-hsing wine; Fun wine; bean cakes; ginseng and birds' nests; drug stores (wholesale); drug stores (retail); Chekiang-Ningpo drugs; Ling Kiang oil, wax, and drugs; China root firms; prepared drugs; gypsum; foreign dispensaries; tobacco-leaf firms; foreign tobacco; Chunchow tobacco leaf; sundry products (at Pan Pien Street); sundry products (at Too Tong); sundry products (Ho Kai); sundry products (Middle Section); Hanchuan sundry products stores; hides, cow or buffalo; northwestern Shansi skins; skins of all sorts, Shansi; cocoons and ass skins; skins for manufacturing pens; bristles; feathers; foreign and Cantonese goods; caps and hats (Kiangsu-made); boots and shoes (Kiangsu-made); transportation companies; shipping offices; Kiangsu and Chekiang contractors; lumber trade; lime trade; varnish and paints; porcelain; brass goods; tissue paper (cotton); book stores and stationery; Anhwei ink tablets; umbrellas; gunny sacks; Che-Shao clothing; Fu Hu cloth (cotton); dealers in beef (butchers); eggs; blue dyers; fruits; garden crops; household woodenware; Liuyang firecrackers; independent enterprises.

AMERICAN INTERESTS.

The pioneers for the United States in the Hankow consular district were the missionaries and some shipping. The American shipping, however, has disappeared entirely from the Yangtze. The existing American interests were a gradual growth prior to the European war, and consequently were not phenomenal. Their development was principally confined to the extension of the trade of one firm—the Standard Oil Co.

MISSIONARY INTERESTS.

The mission work of the churches of America occupies a preeminent place in this consular district. In the Province of Hupeh the American Church Mission, the official representative of the Protestant Episcopal Church in the United States, has an extensive educational system for both boys and girls, while in the Province of Kiangsi the same may be said for the American Methodist Episcopal Mission. The American Lutherans have a very large work in the Province of Honan and, in addition, assist in the maintenance of two theological training schools in Hupeh—one in conjunction with the Swedish missions at Kingchow and the other near Hankow, in connection with the Norwegian and Finnish missions. The Christian and Missionary Alliance carries on a highly commendable work in the Province of Kansu, on the borders of Tibet. In Shensi, the principal mission work is carried on by Americans of Swedish extraction in connection with the China Inland Mission. The outline sketch given below will show clearly the extent of the work carried on by the various missions.

KIANGSI PROVINCE.

The American Methodist Episcopal Mission carries on evangelistic, medical, and educational work. In Kiukiang there are the William Nast College, with four American professors; the Rulison High School for Girls, with four American teachers; the Knowles Bible Training School for Women, with three American teachers; and a hospital. In Nanchang there are three Americans in general work and a hospital with one American.

The American Church Mission has two Americans at Kiukiang and two Americans at Nanchang.

In the China Inland Mission there are six Americans.

The American Bible Society at Kiukiang has one American.

The Y. M. C. A. at Nanchang has one American.

The American mission interest in the eastern part of the Province is considerable, but no details are available.

HUPEH PROVINCE.

The American Church Mission's work in Hupeh is of supreme importance. At Wuchang there are under its auspices Boone University, with seven Americans and three Britishers; St. Hilda's Girls' School, with four Americans; and a hospital, in which there are three Americans and two Britishers in the men's department and two Americans in the women's department. At Hankow it maintains a training school for women with four Americans. It also conducts evangelistic and school work in Hankow, Wuchang, Shasi, and Ichang, in which 20 Americans are engaged. The baptized Christians number 5,550. It has 15 boarding schools, with 1,206 pupils. The day school has 2,287 pupils.

The Lutheran Missions engage two Americans in their theological seminary at Kingchow.

At Hankow is the American Bible Society, with one Britisher, and the Seventh Day Adventist Mission, with four Americans. The Pittsburgh Bible Institute, at Shihnan, has three Americans, while the Christian and Missionary Alliance, at Wuchang and Hankow, has seven.

KANSU PROVINCE.

The Christian and Missionary Alliance maintains stations at Titao, Minhsien, Chone, and Taochow, having 11 Americans.

SHENSI PROVINCE.

The Scandinavian Alliance Mission has stations at Sianfu, Yinkiahwei, Hingping, Sangkiachwang, Wukung, Lichuan, Kienchow, and Pinchow, having 58 Americans under its direction. The work carried on in this Province is excellent and second to none, though the China Inland Mission has done excellent work there.

HONAN PROVINCE.

The American Lutheran Mission in its field in southern Honan has headquarters at Sinyang. This work began in 1898. Forty-seven missionaries are engaged, of whom 32 are American citizens. The mission maintains 6 central stations, 47 outstations, 65 native workers, 1 hospital providing work for 4 doctors (3 Americans and 1 native), 6 deaconesses, 1 trained nurse, 1 male nurse, 14 foreign pastors, 14 foreign evangelistic workers, and 5 American teachers in two middle schools. It has 1,500 church members, and has an annual budget of about $50,000 United States currency.

The Augustana Synod Mission began work in 1906 with 28 American workers, of whom 8 are ordained men, 8 missionaries' wives, 2 doctors, and 2 nurses. They have 6 stations and one middle school. The field is Hsuchow, Honanfu, Juchow, Paofeng, Kiahsien, and Yuchow.

The Lutheran Board of Missions has recently begun work with four American workers—two ordained, one a teacher and nurse, and one a wife. The first worker arrived in 1914. The field of labor is Kweiteh.

The Lutheran Brethren Mission has taken the field of Tsaoyang, Hupeh, and Tungpeh, Honan. Work was begun in 1902. It has three stations and one girls' middle school, with 80 pupils.

For the Lutheran Synod Mission the first worker arrived in 1912. The field is Kwangchow, Kwangshan, and Hsihsien. There are nine American missionaries, of whom three are ordained, three wives, one a woman nurse, and two teachers. The number of Christians is approximately 250. This mission plans strong medical work and schools.

The Hauges Synod Mission began work in 1891 in the field of Fanchang, Hupeh. It has 4 head stations, 16 congregations, 30 other outstations and preaching places, 3,500 Christians, and two middle schools—one for boys and one for girls, with 85 students in each. The mission does union medical work with the Swedish-American Missionary Covenant, with one American doctor, one Chinese doctor, one foreign nurse, and two Chinese. It conducts union work in a theological seminary at Shekow with the American Lutheran Mission, the Finnish Missionary Society, and the Norwegian Missionary Society. Ten men from the Hauges Synod Mission graduated from the seminary in 1916. Union work with the American Lutheran Mission, the Augustana Synod Mission, and the Lutheran Synod Mission for the establishing of a school for missionaries' children is also being carried on at Kikungshan, where a large building has recently been completed. Each of the united missions will furnish one worker for this institution, whether as teacher or as matron. At present the school has two American teachers, one from the Hauges Synod Mission and one from the American Lutheran Mission, counted under these missions' teachers. Seventeen members of this mission are Americans, of whom 1 is a doctor, 4 do educational work, and 12 are engaged in evangelistic work.

A Lutheran minister and his sister are working in Tanghsien, Honan, having begun in 1915.

The Evangelical Lutheran Mission Society for China began work in 1913, with two missionaries and their wives. Its field is Hankow.

The Swedish-American Missionary Covenant has selected the field of Siangyang, Fancheng, Kingmen, and Kingchow, Hupeh. The first worker of this mission arrived in China in 1890. It has 13 congregations and 29 other outstations and preaching places. This mission carries on union work with the Hauges Synod Mission in the hospital above mentioned and supplies two doctors—one American and one Chinese—and two American nurses to the medical staff. It cooperates with the same mission in its girls' middle school, furnishing one American woman teacher and bearing its share in the running expenses of the school. It cooperates with the Swedish Covenant Mission from Sweden in the Kingchow Seminary, furnishing two American professors for this institution.

FINANCIAL AND COMMERCIAL INTERESTS.

The nonmissionary American interests in the Hankow district are those incident to the Hukuang Railway Loan, including the supplies to the Canton-Hankow section. The furnishing of those supplies was made possible by the European War, which precluded substantial competition; this condition enabled American firms to procure contracts for articles not usually made in America in acceptable designs.

There are two American banks maintaining local branches in Hankow. The International Banking Corporation has been established there for a great many years, and, since acquisition by the National City Bank of controlling interest in it, it has become a very important factor in the interchange of trade between Hankow and the United States. It plans to provide new facilities, including the acquisition of its own building site on one of the most prominent lots in the British Concession. The new building will give the bank prestige with the Chinese, and it is expected that this institution will take its place well up among the foreign banks.

The Asia Banking Corporation was opened in Hankow in February, 1919, with the support of a number of prominent American mother institutions such as the Guaranty Trust Co. and the Anglo and London-Paris National Bank. It promises to become a great factor in the development of American trade between China and the United States. This institution is said to have relations that will enable it to become a very important foreign bank in Hankow.

Commercially, America is now well represented by local branches for the importation of timber, certain more essential lines of machinery and railway supplies, and electrical equipment. For handling exports American concerns have branches particularly well situated for buying wood oil, hides, and skins, but for other articles Americans must depend to a large extent upon firms of other nationalities.

Americans other than missionaries own at the port of Hankow real estate to the estimated value of a million gold dollars.

American interests fall far short of what they should be. They are exceeded in all nonmissionary particulars by those of Japan, Great Britain, Germany, Russia, and France. American trade interests have increased since the beginning of the war—more because of Chinese necessity than American efforts. Never has a nation had offered to it such rich opportunities to extend its commercial interests practically without competition, but Americans have apparently failed to realize the importance of energetic action.

The most promising fields for American activity are difficult to state, because there are so many. Among them would certainly be building or advancing loans (conditioned upon purchase of American or Chinese equipment) to build railways, highways, cold-storage plants, electrical plants, flour mills, cotton mills, paper mills, and mining enterprises, provided adequate protection could be guaranteed. Hankow being most important for exports, the establishment of a branch there to buy any of the raw products mentioned in other parts of this report is very desirable and would prove to be profitable.

GENERAL TRADE SUGGESTIONS.

General trade suggestions have largely been embodied in previous sections of this report, but to American exporters who desire China trade it is suggested that the principal office be established at some desirable point, usually Shanghai, and that, if the demand is sufficient to justify it, the Hankow consular district should be covered by a branch house with an American manager; if not, a traveling representative should cover the field at stated periods. None but Americans should be in command of the firms intending to conduct the sale of American merchandise. In order to maintain any trade after the war this will be imperative.

Americans intending to import from China should have head offices in Hankow for any or all products exported, with the exception of the single item of soya beans and their by-products.

HONGKONG CONSULAR DISTRICT.

By Consul General George E. Anderson.

LOCATION AND AREA.

Hongkong is a British Crown Colony and was ceded to Great Britain by the Chinese Government in 1841. By the conventions of 1860 and 1898, further territory was ceded by China; this concession is for a period of 99 years. The island of Hongkong is situated off the coast of Kwangtung Province, near the mouth of the Canton River. It is distant about 40 miles from Macao, a Portuguese possession, the oldest European settlement in China, and 90 miles from Canton. It lies between 22° 9′ and 22° 17′ north latitude and 114° 5′ and 114° 18′ east longitude. It is distant in statute miles: From Manila, 720; from New York, via Panama, 12,984; from San Francisco, 7,877; from London, via Suez, 10,894; from London, via the Cape, 14,645; from Shanghai, 931; from Yokohama, 1,755; from Sydney, 4,950; from Port Said, 7,240; from Panama, 10,765; from Marseille, 8,651; from Seattle, 8,302; from Calcutta, 3,453.

The island of Hongkong, 28 square miles in extent, is about 11 miles long and from 2 to 5 miles broad; its circumference is 27 miles. Kowloon, consisting of 4 square miles, was ceded by China in 1860; and the New Territories, consisting of 286 square miles on the mainland and the islands of Lantao, Lamma, Chingchow, and others, totaling approximately 90 square miles, were ceded by China to Great Britain in 1899. The island of Hongkong is not more than half a mile distant from the mainland, the narrowest point being at Lyeemun Pass.

POPULATION.

According to the census of 1911 the population of Hongkong, British Kowloon, and the New Territories was 455,283, including 55,157 floating population. The population per square mile was 977. The population was divided as follows: Europeans and Americans, 5,185; Portuguese, Indians, and other non-Chinese, 6,040; Chinese, 383,716. The population of the colony of Hongkong at the end of 1918 was estimated to be about 468,100. The fluctuation is always very large, owing to various causes, the chief one being the continued state of unrest in Canton and large cities in the Canton delta. The city of Victoria has about 280,000 people, while the inhabitants of the colony of Hongkong and its dependencies number more than 500,000. The area of the colony of Hongkong is 316 square miles, or exactly the area of New York City.

PHYSICAL FEATURES.

The island of Hongkong consists of a broken ridge of lofty hills, the highest, Victoria Peak, being approximately 1,800 feet in height. There are few valleys of any extent and scarcely any ground for cultivation. The New Territories are made up chiefly of mountain ranges (the highest peak being more than 3,000 feet in height). In general, the hills and mountains are bare and the soil is poor.

CLIMATE.

In former days Hongkong enjoyed a most unenviable notoriety for unhealthfulness, but the influence of tree planting (particularly pine forests) and the elaborate system of nullahs and other sanitary improvements has made Hongkong one of the most healthful places that can be found in the corresponding latitude. The general death rate per 1,000 in 1914 was 12.99 for the non-Chinese community and 23.88 for the Chinese community. The rise in the general death rate from 21.16 per 1,000 in 1913 to 23.34 in 1914 was due to the epidemic of bubonic plague, which accounted for no fewer than 2,020 deaths. The mean temperature for the year is about 71°. The average highest temperature is about 92°. The average lowest temperature is not much below 36°. The average rainfall is about 85 inches for the year. The last typhoon of any importance visited the colony in 1909. In 1913 the Hongkong Observatory recorded the tracks of 14 typhoons during the year. These typhoons generally pass either south or north of the colony, but the effect on the local weather conditions is usually very marked. The Hongkong Observatory issues daily charts of the weather, which are obtained from meteorological observations from 40 stations in China, Indo-China, Japan, and the Philippines, and a daily forecast is also issued for Hongkong and the district and Formosa channel, and points south. The American consulate general receives from the Manila Observatory typhoon warnings, which are distributed to the shipping companies, government officials, and clubs.

POLITICAL ORGANIZATION.

The colony of Hongkong is administered by a governor, aided by an executive council consisting of five officials and two unofficial members. The legislative council is presided over by the governor and is composed of the officer commanding the troops, the colonial secretary, the attorney general, the treasurer, the secretary for Chinese affairs, the director of public works, the harbor master, the captain superintendent of police, and six unofficial members, one of whom is elected by the Hongkong Chamber of Commerce and the other by the justices of peace. The other four, two of whom are Chinese, but British subjects, are appointed by the governor. Foreign consuls deal only officially with the colonial secretary. Unofficially foreign representatives have dealings with the secretary for Chinese affairs (who is also registrar general), the harbor master, and the captain superintendent of police. In commercial matters, as between merchants and the government, the Hongkong Chamber of Commerce usually acts as the intermediary.

EDUCATION.

From the first days of the cession of Hongkong to Great Britain the religious and educational needs of the colony have always been uppermost in the minds of the administrators and laymen, and in the early days the government accepted the part of proselytizer and began at once the establishment of a grant school.[1] The educational conditions in Hongkong have been peculiar, on account of the physical features of the land and the complexity of the population. There are two natural divisions from an educational point of view—the urban and the rural. The urban division is the densely populated city of Victoria, including representatives of practically all nations of the world, the enormous majority, however, being Chinese. The importance of this urban division is out of all proportion to its area, since it comprises a population of 280,000. The rural division comprises the rest of the colony, and is a problem in itself. Its inhabitants are poor, primitive in their ways of living, and extremely hard to reach in an educational way.

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[1] By a "grant school" is meant a school conducted by a missionary society but receiving financial aid from the government and subject to government inspection.

During the period from 1901 to 1910 the educational system may be said to have more or less established itself. In 1911 the Hongkong University was opened and from this dates the most progressive period in the history of education in the colony. In 1913 the education ordinance was passed requiring compulsory inspection of schools. There has been a general tendency to develop government rather than grant schools and to encourage the upper-grade rather than the lower-grade schools. The government schools are 15 in number, and most of the education of the English and Indian children of the colony, as well as a great part of the education in English of the wealthier Chinese, is undertaken by government schools. The system can be conveniently classified as follows: Government schools, military schools, private schools, grant schools, controlled private schools, and the technical institute. The total number of pupils attending these schools is 19,431, according to a recent report of the director of education. The total net expenditure on education by the government is approximately $100,000 gold. The more important secondary schools in the colony are Queen's College, St. Joseph's, Ellis Kadoorie, St. Paul's, St. Stephen's, Belillos Public School, the Peak School, and Kowloon British School, for European scholars, and a number of convent schools. The Hongkong University is incorporated by a local ordinance. It has accommodations for 500 undergraduates. There are 11 classrooms and 8 laboratories and workshops. The university has three faculties, those of engineering, medicine, and arts. The present teaching staff consists of a professor of engineering, with six lecturers, a professor of English and history, with one lecturer, a professor of economics, with one lecturer, and professors of mathematics, physiology, and anatomy. A lecturer in law is to be appointed. There are also nine part-time lecturers, mostly in medicine. The number of undergraduates is 230. Already the usefulness of the university has been proved by the number of graduates in engineering and medicine, who, in general, have entered into the civic life of China, thereby fulfilling the very purpose the founders had in mind.

The faculty of medicine in the Hongkong University represents the only school of medicine in the colony.

The hospitals are as follows: Alice Memorial Hospital; Alice Memorial Maternity Hospital; Government Civil Hospital, and the lunatic asylum connected therewith; Hildesheim Mission Blind Asylum (Kowloon); Ho Miu Ling and Tung Wah Hospitals; Matilda Hospital; Nethersole Hospital; Victoria Hospital; Peak Hospital; and military and naval hospitals.

Foreign missionary institutions are: Berlin Foundling House; Church Missionary Society; Dominican Missions in the Far East; London Mission; Pentecostal Mission; Procure des Missions Etrangères; Young Men's Christian Association of Hongkong, Chinese and European.

The use of modern school supplies has not been carried to the same high standard as in the United States. The supplies are usually imported from Great Britain or manufactured locally according to English ideas and specifications.

AGRICULTURE.

There is practically no agricultural district in the colony of Hongkong, including the New Territories. The land is not suitable for tillage, and nothing is grown but a little rice and some vegetables near the outlying villages. In the New Territories, especially, the Government is paying considerable attention to the planting of trees. The island of Hongkong is well covered with trees, but at present they are without commercial value.

MINERALS AND MINING.

Tin has been found in the New Territories, but apparently not in paying quantities, as no attempt has been made recently toward developing the mines. There are large granite quarries on both the island and the mainland. A great amount of this stone is of the finest character, suitable for the best kinds of structural work, while the remainder is found in varying states of decomposition, generally much iron-stained, and is only suitable for road making. No machinery is used in connection with the quarrying and finishing of granite, and it is doubtful whether it could be employed with profit and advantage. Lead mines are being worked in a small way.

RAILWAYS.

The Kowloon-Canton Railway was formally opened for through traffic in October, 1911, the British section being opened practically a year before the Chinese section was ready. The British section was constructed by the Hongkong government and extends from Kowloon to Samchun, a distance of about 22 miles. The Chinese section was constructed by the Chinese Government by money loaned by the Hongkong government; it extends from the border of the British territory at Samchun to Canton, a distance of 89 miles. The first survey of the line was commenced in 1905 and completed about a year later. The British section includes in its 22 miles five tunnels and 49 bridges. The ruling gradient is 1 in 100; the gauge is 4 feet 8½ inches; the rails are 85 pounds; there are sleepers of Australian hardwood, 2,000 to the mile. The Chinese section is of the same gauge, rails, and standards. The ruling gradient is 1 in 150. The British section has been constructed through mountains, and tunnels are its feature; the Chinese section has been constructed on much less difficult ground, and bridges are its feature. The British section cost $12,296,929 Hongkong currency,[1] or approximately $6,200,000 gold, and the Chinese section cost $15,500,000 Hongkong currency, or $7,750,000 gold. The British section cost for construction approximately $246,000 gold per mile and the Chinese section about $73,150 gold per mile.

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[1] See footnote on p. 84.

The rolling stock on the British section is as follows:

(1) *Main line (British section, 22.24 miles; Chinese section, 88.73 miles).*—Locomotives (4-foot 8½-inch gauge)—Kitson, 89 tons 15 hundredweight, 8; Hudswell Clarke, 29 tons 7 hundredweight, 2; locomotive crane, 15 tons, 1; total, 11. Coaching vehicles (4-foot 8½-inch gauge)—first-class saloon coach, 1; first-class dining car, 1; first-class carriage, 1; second-class carriages, 2; first and second class composite carriages, 3; first and second class composite carriage and buffet, 1; third-class carriages, 13; third-class luggage and brake, 3; kitchen luggage and brake, 1; total, 26. Goods vehicles (4-foot 8½-inch gauge)—30-ton covered goods cars, 5; 30-ton rail bogie cars, 2; 30-ton open goods cars, 5; 15-ton covered goods cars, 24; 15-ton cattle trucks, 2; 15-ton open goods cars, 10; 15-ton goods brake vans, 2; total, 50.

(2) *Fanling-Shatowkok branch line (7½ miles).*—Locomotives (2-foot gauge)—Hudswell Clarke, 5 tons 3 hundredweight, 2; 10 tons, 1; total, 3. Coaching vehicles (2-foot gauge)—first-class carriage, 1; first-class and brake composite, 1; third-class and brake composite, 1; third-class carriages, 3; total, 6. Goods vehicles (2-foot gauge)—Steel-sided goods wagons (60 cubic-foot capacity), 3.

Particulars of the traffic during a recent year are given in the following table:

MAIN LINE (THROUGH).

Passengers.			Goods.		
Classes.	British section to Chinese section.	Chinese section to British section.	Classes.	British section to Chinese section.	Chinese section to British section.
First	3,560	5,266	General merchandise..piculs	148,860	146,587
Second	17,597	24,005	Live stock..........number	....	35
Third	189,513	227,401			
Total	210,670	256,672			

MAIN LINE (LOCAL).

Passengers.			Goods.	
Classes.	Single fare per mile.	Number.	Classes.	Quantity.
	Hongkong cents.			
First	About 8	8,652	General merchandise............piculs	134,072
Second	About 4	16,132	Government stores................do	2,676
Third	About 2	363,745	Live stock........................number	912
Total	....	388,529		

FANLING-SHATOWKOK BRANCH LINE.

First	About 6	1,657	General merchandise............piculs	14,164
Third	About 3	46,271	Government stores................do	8.50
			Live stock........................number	19
Total	....	47,928		

Note.—Picul equals 133⅓ pounds.

The gross earnings of the British section in the year 1918 were as follows:

Traffic.	Local.	Through.	Branch.	Total.
	Hongkong currency.	*Hongkong currency.*	*Hongkong currency.*	*Hongkong currency.*
Coaching	$132,353	$234,975	$7,482	$374,810
Goods	10,762	27,968	779	39,509
Sundries	16,204	2,752	....	18,956
Total	159,319	265,695	8,261	433,275

The expenditures during the same year were:

Items.	Main line.	Branch line.	Total.
	Hongkong currency.	*Hongkong currency.*	*Hongkong currency.*
Maintenance of way and works	$44,922	$3,670	$48,592
Locomotive, carriage, and wagon expenses	204,705	7,087	211,792
Traffic expenses	53,675	1.381	55,056
General charges	40,717	....	40,717
Miscellaneous expenditures	64	....	64
Total	344,083	12,138	356,221

The net earnings of the British section during 1918 amounted, therefore, to $77,054 Hongkong currency.

Main-line train mileage during the year totaled 230,746 miles, while the mileage on the Fanling line was 24,973.

Exhaustive contour surveys were carried out in 1918 over the routes for the projected branch lines to Taikoktsui and Taiwan Bay. Plans and sections covering the work have been prepared, and estimates have been completed.

The passenger rates on the British section range from 2 cents a mile, third class, to about 8 cents, first class. Through passenger rates between Kowloon and Canton and intermediate stations on both sections average about 5 cents a mile, single fare, for first class, and a fraction over 1 cent for third class. These prices are quoted in Hongkong currency. The Fanling-Shatowkok branch, 7½ miles in length, is a narrow-gauge line and since February, 1916, it has been run more on the tramway system than formerly. There is a 2-cent fare between each halt.

The freight rates on the British section, per mile per picul, in Hongkong currency, are as follows: Explosives, maximum 7½ cents, minimum 1½ cents; class I, maximum 4 7/10 cents, minimum 1 1/5 cents; class II, maximum 3 cents, minimum 3/5 cent; class III, maximum 1 1/5 cents, minimum 6/25 cent. Class I may be represented by bristles, class II by bicycles in crates, and class III by candied fruits. Low special rates are given for fruits, game, ginger, haberdashery, etc.

The minimum freight charged for a consignment carried by freight trains is 25 cents; the minimum distance charged is as for 15 miles. The goods carried are general merchandise.

The yearly contracts for coal and miscellaneous stores are put out to public tender, and as a rule British products are specified so far as possible.

TRAMWAYS.

The Hongkong Tramway Co. (Ltd.) and the Peak Tramways Co. (Ltd.) operate the only two tramways in the colony of Hongkong. The lines of the Hongkong Tramway Co. (Ltd.) run through the city of Victoria from Belchers Bay to East Point and Happy Valley and thence on to the village of Shaukiwan, a total length of 10 miles. The cars are about equally divided between the ordinary type and double-deckers. Each car weighs about 9½ tons. The company is under the immediate control of a general manager with a board of directors. The construction materials, rolling stock, etc., are of British origin. The rates are 5 cents, Hongkong currency, for second class and 10 cents for first class. In 1917 the net profit of the company reached $296,635 United States currency, on a capitalization of only $395,400.

The Peak Tramway was opened to traffic in 1888. It is on the wire-rope system and runs to Victoria Gap, where the stationary engine is placed, the lower terminus being near St. John's Cathedral. The ropes and other material are purchased in England. The number of cars in actual service is two, and one is held for emergency. The fare is 30 cents each way for first class and 10 cents for second. Punch tickets for both classes at slightly reduced rates are obtainable. Season tickets for three months are generally used by persons living on the Peak.

A series of tramway lines, 9½ miles long, will be constructed in Kowloon and operated by the government of Hongkong, unless private interests can be found which are willing to conduct the enterprise upon terms satisfactory to the colonial authorities. Kowloon is the peninsula opposite Hongkong and is becoming densely populated in places owing to the construction there of extensive docks and wharves.

ROADS.

A noticeable feature of the traffic conditions in the island of Hongkong and the New Territories is that there are practically no vehicles (except jinrikishas) and no draft animals of any sort. In Hongkong the nature of the roads makes the use of draft animals practically impossible. On the streets in the city of Victoria and in the villages transportation is effected by trucks hauled by coolies or else the goods are carried by the coolies. On the upper and Peak levels the coolies perform these services. There are a few motor trucks in use, these being limited to the streets in the city. As a matter of fact, the roads on the upper and Peak levels are not adapted for vehicles of any kind. Motor cars for pleasure are restricted to a few roads. In the New Territories the same conditions obtain in general, although the highways are adapted for heavy motor and vehicle traffic. The roads both on the island and the mainland are kept in excellent condition, and most of those in Hongkong are either asphalted or made of concrete. The Jubilee Road on the island has been extended to Deep Water Bay, and a 16-foot road has been extended to the border between British and Chinese territory near Fanling. It is now possible to motor from Kowloon to Castle Peak, a distance of 40 miles, and surveys have been completed to connect Castle Peak with Kowloon, a distance of 20 miles.

POSTAL FACILITIES.

The Hongkong general post office, because of the unrivaled shipping facilities at Hongkong, is the great distributing center of the Orient for the receiving and dispatching of mails. Mails in transit make up considerably more than half of the actual number of bags of mail handled at the Hongkong office. The total of the international and Hongkong registered correspondence and parcels averages over a million. The total number of Chinese registered articles amounted to nearly 210,000 in 1915, a large decrease over preceding years, mainly on account of the interruption of the trans-Pacific steamship services. More than half of these registered articles originate in the United States and Canada. There is a parcel post between Hongkong and the United States. The rules pertaining thereto, taken from the Hongkong Postal Guide, are as follows:

The following rules apply to the exchange of parcel post with the United States when parcels are posted to be sent via London:

(*a*) The charges payable in Hongkong currency on parcels for the United States are partly postal and partly nonpostal.

(*b*) The nonpostal charges which must be paid in advance are as follows: (1) Sixty cents on every parcel due to the American Express Co., for customs clearances and formalities, and (2) 60 cents in respect of the charges levied by the United States Government under the title of "Sample office fee" or "Storage fee" on every parcel entering the country.

(*c*) The postal charges must be prepaid by means of stamps affixed to the cover of the parcel. It is open to the sender: (1) To prepay in the same way the nonpostal charges other than customs duties. (2) While prepaying the charges specified under heading 1, to assume responsibility for the customs charges, so that the parcel may be delivered free of cost to the recipient. In this case it will be necessary to proceed in the manner described in rule 170. This arrangement insures a speedier conveyance, since ordinary parcels will remain at the New York customhouse until the addressees have remitted thither the amount of duty and other charges upon them. The charges not prepaid by the sender will be collected from the addressee.

(*d*) The sender may, without extra charge, direct that a parcel be sent through the New York customhouse in bond, for customs examination at any of the United States ports of entry or inland customhouses. This arrangement also does away with the delay at New York referred to in the preceding paragraph; but, on the other hand, the addressees will have to make arrangements for the delivery of parcels so treated after they have been cleared at the customhouse of the inland port of entry. The sender of a parcel intended to be forwarded in bond must mark it plainly "In bond to ———," naming the inland port of entry chosen, and the same words must also appear in the same handwriting on the customs declaration which accompanies the parcel.

(*e*) The nonadhesive form of customs declaration must be used. Two copies are required. If the parcel is to be sent in bond to an inland port of entry, it must be indorsed as directed in paragraph (*d*). Moreover, if the value of the goods contained in the parcel exceeds $100 gold, the declaration must be made before a United States consul on forms supplied by him.

When parcels are posted to be sent via San Francisco or to the Philippines:

(1) The contents of all such parcels must be specially declared, and must if over $100 in value be accompanied with a United States consular invoice.

(2) The weight limit must not exceed 11 pounds.

(3) Parcels must not be sealed.

(4) Parcels can not be registered or insured, and no compensation is payable should any such be lost or damaged when forwarded by this route,

In respect to money-order business between the colony and the United States there is an agreement between the two administrations for the direct exchange of money orders.

The time required to receive first-class mail matter from New York varies considerably. Letters sent via San Francisco by the regular liners take about 31 days; if they are mailed via Vancouver on the Canadian Pacific steamers the time is cut down to 23 days. The boats carrying mail to the Puget Sound ports, Seattle and Portland, are slower and the time, in general, would be somewhat longer.

TELEGRAPHS.

Hongkong has three telegraph companies, namely, the Eastern Extension, Australasia & China Telegraph Co. (Ltd.); the Great Northern Telegraph Co. (Ltd.); and the Chinese Telegraph Administration. The Eastern Telegraph system has cable connections throughout the world, but is without cable landings in the United States. Messages for America are sent via the Commercial Pacific Cable Co. or the trans-Atlantic telegraph companies. The supplies of this company are mainly obtained directly from the head office in London. The rates in Hongkong currency are fixed every quarter, subject to alterations without notice.

The head office of the Great Northern is in Copenhagen. The cables and land lines of this company connect with the Faroe Islands, Iceland, Great Britain, Denmark, France, Sweden, Finland, Russia, Siberia, Japan, China, and Hongkong. It has no cable landing in the United States, but has connections with the trans-Atlantic telegraph companies and the Commercial Pacific Cable Co. This company manufactures most of its own instruments. The tariff rates are published in Hongkong currency and are changed quarterly, subject to alterations without notice.

The Chinese Telegraph Administration has a direct wire to Canton, one to Swatow, and one to Shameen. For service to Shanghai and Peking the message is sent to Canton and there repeated. The rate to points in Kwangtung is 9 cents, Hongkong currency, per word, and to other places 18 cents per word. This company has no cable connections with the United States. All materials are supplied by the head office at Shanghai.

The wireless station at Hongkong is located at Cape d'Aguilar, on the island of Hongkong, and it has a radius of 500 to 700 miles by day and 1,300 miles and over by night. The service is in charge of the general post office of the Hongkong government. The charges are $1.50 gold for a 10-word radiogram (this being the minimum charge) and 15 cents gold for each additional word.

TELEPHONES.

The China & Japan Telephone & Electric Co. (Ltd.), incorporated in the United Kingdom, is the only telephone company operating in the colony of Hongkong and the New Territories. It is on the magneto ring system, which is the one used to a large extent in the Orient, the instruments being manufactured by L. M. Ericsson & Co., of Stockholm, Sweden. The rental of each installation is £10 per annum for all places within 1 mile of the company's exchanges. Extension telephones up to any number in the same building are charged for at £2 10s. per annum each. The banks, the leading hongs, and a number of the hotels and boarding houses are equipped with subexchanges. On December 31, 1914, there were 2,973 telephones and 3,800 miles of single wire. The prospects of extension are limited.

NEWSPAPERS.

Four daily newspapers in the English language are published in Hongkong, two being morning and two evening papers. These papers reach all the English-speaking people in the ports of south China. Five papers are published in Chinese. Following are the advertising rates, subscription prices, and estimated circulation of these nine newspapers:

South China Morning Post, Hongkong; daily morning newspaper, in English. Advertising rates: $5 Hongkong currency to $8 Hongkong currency per inch per month. Annual subscription price: $36 Hongkong currency. Estimated circulation: 3,500.

Hongkong Daily Press, Hongkong; established 1857; daily morning newspaper, in English. Advertising rates: $7 Hongkong currency per inch per month. Annual subscription price: $36 Hongkong currency. Estimated circulation: 2,000.

Hongkong Telegraph, Hongkong; daily afternoon newspaper, in English. Advertising rates: $5 Hongkong currency per inch per month. Annual subscription price: $36 Hongkong currency. Estimated circulation: 3,000.

China Mail, Hongkong; daily afternoon newspaper, in English. Advertising rates: $5 Hongkong currency per inch per month. Annual subscription price: $36 Hongkong currency. Estimated circulation: 2,000.

Wah Tsz Yat Pao (Chinese Mail), Hongkong; daily newspaper, in Chinese. Advertising rates: $9 Hongkong currency per 100 characters per month. Annual subscription price: $11 Hongkong currency. Estimated circulation: 4,000.

Chung Ngoi San Po (Chinese Daily Press), Hongkong; daily newspaper, in Chinese. Advertising rates: $4 Hongkong currency per 100 characters per month. Annual subscription price: $11 Hongkong currency. Estimated circulation: 1,200.

Sheung Po, Hongkong; daily newspaper, in Chinese. Advertising rates: $12 Hongkong currency per 100 characters per month. Annual subscription price: $11 Hongkong currency. Estimated circulation: 2,500.

Shat Po, Hongkong; daily newspaper, in Chinese. Advertising rates: $7.50 Hongkong currency per 100 characters per month. Annual subscription price: $11 Hongkong currency. Estimated circulation: 2,000.

The Tsung Wan Yat Po, Hongkong; daily newspaper, in Chinese. Advertising rates: $12 Hongkong currency per 100 characters per month. Annual subscription price: $11 Hongkong currency. Estimated circulation: 2,000.

WEIGHTS AND MEASURES.

The English weights and measures are generally used in Hongkong, with the exception of the following units, which are employed commercially: 1 tael = 583.3 grains (0.08 pound avoirdupois) = 37.783 grams; 16 taels = 1 catty = 1.333 pounds = 604.53 grams; 100 catties = 1 picul = 133.3333 pounds = 60.453 kilos.

PATENTS AND TRADE-MARKS.

The Hongkong ordinances make no provision for the original patenting in the colony of any article or process, as there are no experts in the employment of the Government who can consider and pass upon the technical specifications of any patent; but by an ordinance (No. 2 of 1892) it is provided that letters patent may be obtained in Hongkong for any invention for which letters patent have already been granted in Great Britain. The only method, therefore, by which any article can be patented in Hongkong is by first obtaining a patent for the invention in Great Britain. By special arrangement it is provided, however, that temporary protection for an inventor can be had in Hongkong while his application for a patent is pending in Great Britain. Patent applications in Hongkong are made through local solicitors—upon petition supported by a declaration or affidavit of the applicant to which a specification of the invention for which patent is sought is attached. Where it is desired to obtain letters patent for a local invention, Hongkong solicitors can prepare the necessary specifications required to be filed on application for letters patent in Great Britain. Where it is desired to obtain letters patent for an invention made and patented in the United States that invention must first be patented in Great Britain, after which letters patent can be obtained in Hongkong.

With regard to trade-marks an ordinance was passed in the colony in 1909, which is formed upon the English act of 1905, and precisely the same rights as to the exclusive use of a trade-mark can be acquired by registration in Hongkong as by registration in England. By the ordinance above mentioned special protection is given to trade-marks used in the colony but invented abroad. In China itself, although the Chinese Government has, in a treaty with Great Britain, undertaken to establish offices throughout the country "where foreign trade-marks may be registered on payment of a reasonable fee," nothing further has yet been done by that Government in regard to the matter. Nevertheless, the rights of foreigners to the exclusive use of their trade-marks is recognized by Chinese officials in China, and occasionally infringers have been punished. No particular form of a power of attorney is required for the purpose of enabling any agent in Hongkong to apply for the registration of a trade-mark, which can only be assigned together with the good will of the business in which it is used.

In Hongkong not only may foreigners obtain registration of their trade-marks but protection will be given by the court against the infringement of a foreign trade-mark whether registered or not. The benefits of the new trade-mark ordinance are not in any way restricted to British subjects.

PUBLIC WORKS AND SANITATION.

PLANS FOR RECLAMATION AND HARBOR WORK.

Several schemes in the line of city building and allotment of certain land of the Government for European population, including the Portuguese, have been under consideration for some years, and no doubt if there had been no war some of these plans would have materialized. The most ambitious plan is in reference to reclamation and harbor work, which would cost several millions. These plans have been practically settled with the possible exception of minor details. The dredging of the harbor to accommodate vessels of greater tonnage is a matter of vital importance, and already some little dredging has been done, though not on the scale that will soon become imperative. The reclamation scheme involves the filling in of that area of the Hongkong harbor inclosed within a line drawn from East Point to a point opposite Arsenal Street, about a mile distant to the north and toward the principal portions of the city of Victoria. The area reclaimed will average about one-fourth of a mile in width. The reclamation of this area will afford considerable expansion of territory in a portion of the colony now congested in population and industrial lines.

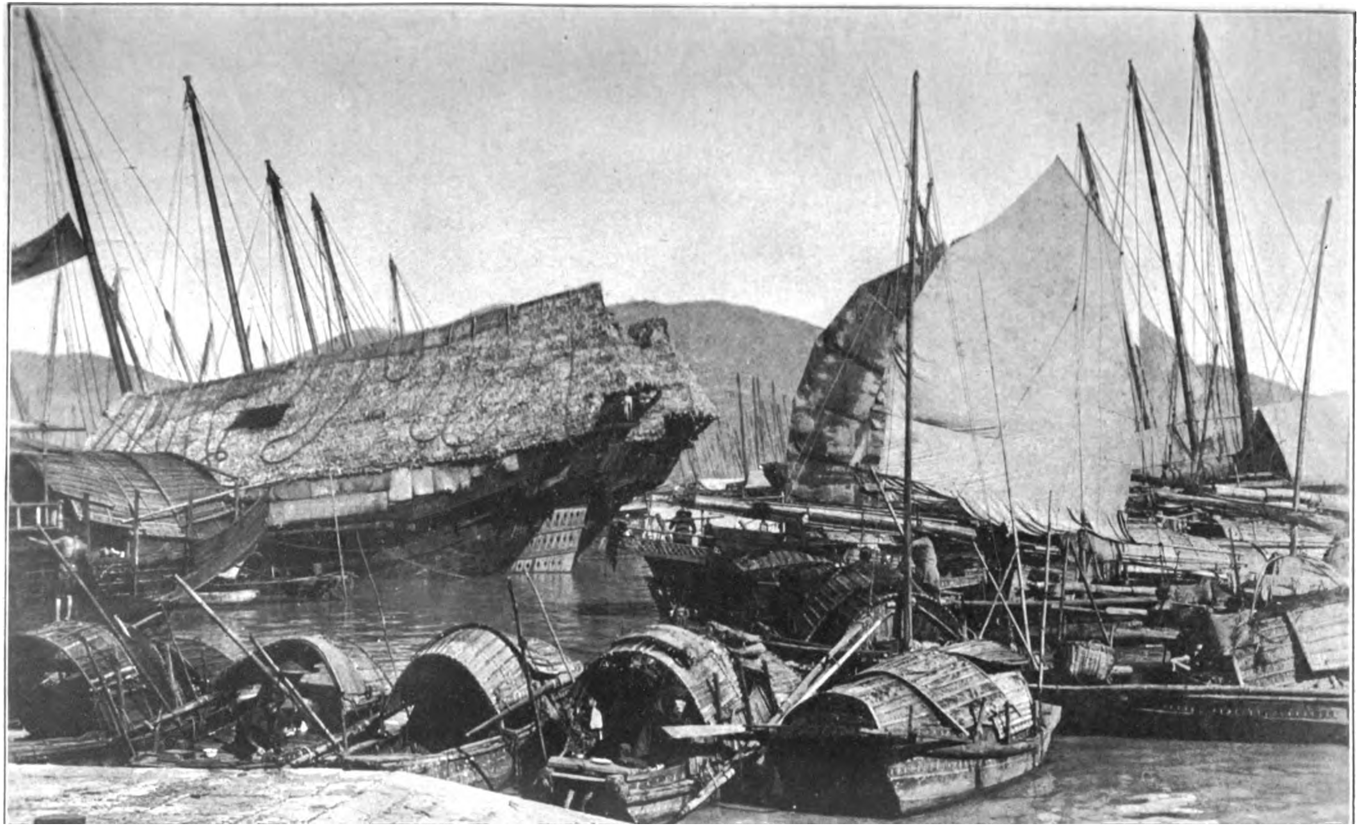
MUNICIPAL ROADS.

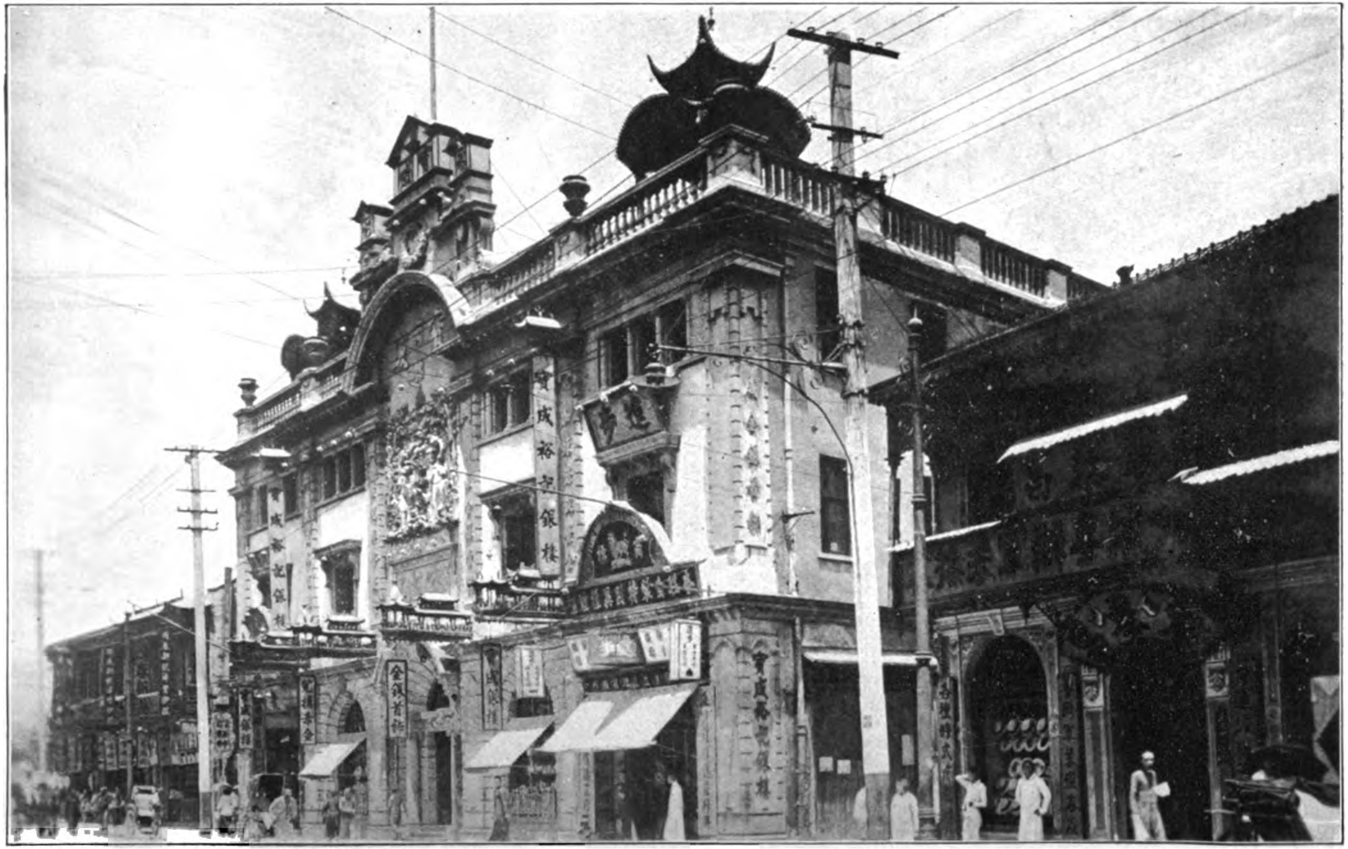
One of the most interesting features of Hongkong is the system of fairly wide streets on the lower levels; the roads on the middle and higher levels, which are not suitable for vehicular traffic; and the roads at the Peak, which are likewise not for vehicles. In addition, there are miles of forestry paths, which extend to practically all parts of the island, and although primarily constructed for the use of the Government they are extremely popular for walking excursions. Altogether there are 98 miles of roads in the island. On the middle and higher levels the roads have been built chiefly of concrete cement at great cost, and the tendency at present is to employ macadam, this apparently proving the strongest against the ravages of torrential rains. On the carriage roads throughout the city of Victoria and environs the bituminous treatment is being used considerably, with satisfactory results, as there is an appreciable diminishing of erosion of surface caused by rain scour. Granite sets, tar macadam, thin coating of tar topping, and tarring and sanding are likewise being employed extensively. The streets are fairly well lighted, gas being generally used. In British Kowloon there are 28 miles of streets, all of them being permanent highways, and in the New Territories there are 50 miles of roads, some of them being military roads. The highway extending from Kowloon through to Taipo to the Fanling golf course is completed. This road runs over the mountains, is 16 feet wide, and is extensively used for motor traffic.

WATER SUPPLY AND SEWERAGE.

The water is obtained from surface drainage on the hills of the island outside the limits of habitation. The water is held in a number of reservoirs placed at proper points, and the filtering is done by sand in four separate filter beds. The analyses are made by the government; the water is of good quality and the results obtained by bacteriological examinations are satisfactory. The Tytam Tuk reservoir, which had been under construction for five years, was opened to public use on February 2, 1918. The dam is capable of impounding 1,419,000,000 gallons of water. With the new reservoir, the colony's water system now has a capacity of substantially 2,166,000,000 gallons.

There is no modern sewerage in Hongkong, and in general the dry-closet system is in vogue. In the European business section of





Photograph by E. M. Newman.

FIG. 17.—A CHINESE JEWELER'S SHOP.

the city flush closets have been installed, and these are being slowly extended. The streets are kept clean and the houses of the Chinese are periodically examined by the sanitary board. There is an increased tendency on the part of the Government to extend the flush closets and otherwise to modernize the sewerage system.

FIRE PROTECTION.

The city is well provided with fire protection, there being two fire floats, one motor fire tender, and four land steamers with the necessary equipment of hose reels, extension ladders, and the like. There is a constant supply of water in the fire mains. There are 38 dispatch boxes in Victoria and 12 in Kowloon, with 8 different telephones to which the police can have access to communicate with the central station in the event of a fire, as well as 12 street fire alarms. The Peak district is also provided with fire apparatus.

PUBLIC-SERVICE COMPANIES.

In the colony of Hongkong there are two electric lighting companies, the Hongkong Electric Co. (Ltd.), on the island of Hongkong, and the China Light & Power Co. (Ltd.), in Kowloon. The plant of the former company is at Wanchai. It consists of four 350-kilowatt Sulzer Diesel engines with Oerlikon alternators, three 200-kilowatt Sulzer Diesel engines with Electric Construction Co. alternators, two 250-kilowatt and two 50-kilowatt Bellis steam engines with Johnson & Phillips alternators; total, 2,600 kilowatts. A new plant, now in process of construction at North Point, Hongkong, will contain two 1,500-kilowatt British Thomson-Houston turbo alternators and three Babcock & Wilcox boilers. The frequency in the present plant is 75 cycles, but in the new installation it will be changed to 50 cycles. The scale of charges[1] is as follows: For monthly accounts under $25, $0.20 per unit, net; between $25 and $100, $0.20 per unit less 10 per cent; between $100 and $250, $0.20 per unit less 15 per cent; between $250 and $500, $0.20 per unit less 20 per cent; between $500 and $1,000, $0.20 per unit less 25 per cent; between $1,000 and $1,500, $0.20 per unit less 30 per cent; over $1,500, $0.20 per unit less 35 per cent. For power supplied to motors of approved pattern, lifts, heating and cooking appliances, $0.07½ per unit, net. For power to restricted hour consumers not using current between the hours of 6 p. m. and 9.30 p. m., $0.05 per unit, net.

The alterations and extension of the China Light & Power Co. (Ltd.) have recently been completed. The details of the new steam plant are as follows: There are two steam turbo generators, each of 750-kilowatt capacity, three phase, 2,200 volts, 60 cycles, made by the British Thomson-Houston Co. The surface condensing plant was made by Merrilees, Glasgow. There are three Babcock & Wilcox water-tube boilers with integral superheaters and Green's economizer. The switchboard was made by the British Thomson-Houston Co. The charges are: For lighting and fans, $0.35 per unit; for large consumers, $0.20 per unit; for motors, $0.07½ per unit.

The gas plant at Kowloon will soon be given up. The gas plant in Hongkong, owned by the Hongkong & China Gas Co., is situated at West Point.

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[1] In Hongkong currency.

The Hongkong coins are: Dollar (Mex.), dollar (British dollar currency), half dollar (Hongkong currency), 20-cent piece (Hongkong currency), 10-cent piece (Hongkong currency), 5-cent piece (Hongkong currency), 1-cent piece (Hongkong currency).

The Hongkong & Shanghai Banking Corporation, the Chartered Bank of India, Australia & China, and the Mercantile Bank of India issue bank notes of various denominations that are also legal tender.

The monetary unit of transactions in Hongkong is the dollar, local currency. The rate of exchange on foreign countries using a gold standard depends chiefly on the fluctuations in the value of bar silver.

In Hongkong there are the following foreign banks:

Bank of Taiwan.
Hongkong & Shanghai Banking Corporation.
Canton Bank (Ltd.).
Yokohama Specie Bank.
Nederlandsche-Indische Handels Bank.
Nederlandsche Handels Mattschappij.
Mercantile Bank of India.
International Banking Corporation.
Asia Banking Corporation.
Chartered Bank of India, Australia & China.
Banque de l'Indo-Chine.
Banque Industrielle de Chine (Franco-Chinese).
Russo-Asiatic Bank.

These banks transact every kind of general banking and exchange business. Interest is allowed on current accounts at 2 per cent per annum on daily balance and 4 per cent per annum on fixed deposits.

Complete banking facilities are afforded the public at the office of the American Express Co.

The Hongkong & Shanghai Banking Corporation conducts the business of the Hongkong Savings Bank, paying 4 per cent on fixed deposits. Concerning this corporation the North China Herald recently said:

> The Hongkong & Shanghai Bank declared a profit for 1918 of $9,820,420. In view of the uncertain trade outlook the chairman advocates a conservative policy and an addition of $1,500,000 to the silver reserve fund. The bank will keep free of control by amalgamated home banks.

Chinese native banks in Hongkong transact all kinds of banking business, including issuance of drafts payable by their respective agents in the treaty ports in China. Chinese banks do not accept current accounts. The shortest period they allow is 14 days and the interest is $0.14 to $0.16 (Hongkong currency) per $1,000 per day for deposits, and $0.18 to $0.20 per $1,000 per day for loans. The rate of interest for time deposits (six months) is $0.12 per $1,000 per day. Chinese banks do not issue loans against real-estate security. Gold coins and Chinese subsidiary coins are accepted for security for loans, and the interest is $0.10 to $0.20 per $1,000 per day.

In Hongkong the following are among the principal Chinese banks:

Tai Yau Bank.
Ming Sun Bank.
Soy Kut Bank.
Wui Loong Bank.
Yut Cheung Bank.

MANUFACTURING AND OTHER INDUSTRIES.

There has been a steady growth in industries and manufactories during the past 10 years, and the opportunities for greater extension are, in general, almost unlimited. Hongkong is a free port and the shipping and storage expenses are very reasonable. On the mainland there is sufficient room for a large development in lines of manufacture. In normal times the cost of importing raw materials is reasonable, and many of the raw materials are produced in the Far East. Iron and steel are imported from Europe and America, but raw sugar, for instance, is brought from Java and the Philippines. Cement is produced in large quantities, the stone coming from China and Haiphong. Hongkong is the center of the rattan and sea-grass furniture industry and, since the war, has been the central point for the exportation of rattans. The food products prepared by the Chinese and shipped to all parts of the world are for the most part grown in the Canton district. There are two sugar refineries, the China Sugar Refining Co. and the Taikoo Sugar Refinery. The first-named has a large distillery, in which quantities of rum are manufactured. The rope factory at Hongkong is said to be one of the best equipped in the Far East and has a very large trade, shipping goods to most European countries besides furnishing most of the oil wells in Burma with their rope equipment. There is a glass factory, a match factory, a cigarette factory, a soap factory, an ice factory, a biscuit (cracker) factory, and a tannery. Lard is produced in large quantities under government inspection. There are knitting mills of some importance run by Chinese. The Dairy Farm has one of the best equipped dairies in the world, with cold storage and other accessories. There are two other cold-storage plants in the colony, one now being used for chilling meat for the Philippine market. The chief meat, dairy, and produce company in Hongkong is seriously undertaking the packing of meat in tins and otherwise for export, and promises to become an important, if not a controlling, factor in the tinned-meat trade in southern Asia. The embroidery makers have passed from old Chinese designs to the manufacture of embroidered goods from late European and American models on order. Local paper makers are undertaking the manufacture of higher-grade paper. Foundrymen are making more and more hardware in foreign style. Canning companies are extending their list of goods packed for export.

The colony has well-established and thoroughly modern dockyards. The Hongkong & Whampoa Dock Co. has very extensive establishments. The No. 1 dock at Hunghom has received the largest British war vessel on the China station. Its dimensions are 576 feet in length, 86 feet in breadth at entrance at top and 70 feet at bottom, and 30 feet of water over sill at ordinary spring tide. The Hongkong & Whampoa Dock Co. announced on March 31, 1919, that the extension to its large plant is ready for the installation of the machinery which is expected to arrive in the course of the summer, some of it from the United States. When the machinery is in place, the company's shipyard will consist of 12 berths—3 of which are for vessels up to 800 feet in length, 5 for vessels up to 500 feet, and 4 for vessels up to 250 feet. Due enlargement of the company's boiler works, machine shops, sawmills, and other establishments is being made on land acquired for the purpose. Land has also been acquired for the construction of a new graving dock between the two large docks already in operation. The new dock will have a length of 1,000 feet, an entrance of 110 feet, and sufficient depth for the largest vessels expected on the Pacific in many years. In the course of the enlargement of its western yard the company is tearing down three blocks of houses which are to be replaced by more modern quarters in a better location overlooking Kowloon Bay. The change is made partly with a view of bettering the living conditions of the company's European staff. The *War Sniper*, the largest ship yet constructed by the Hongkong & Whampoa Dock Co., was successfully launched March 27, 1919. The vessel is 412 feet long, has a capacity of 8,000 tons, and a speed of 11 knots. This is the second of a series of six vessels; one of which, somewhat smaller, known as the *War Drummer*, had previously been launched. Three of the others and the *War Sniper* are built entirely of American steel and other materials. They are in the B class, standard type, built to the order of the Controller of Shipping in London, and to Lloyd's highest class 100 A 1. These ships are constructed entirely in the Hongkong shipyard.

The Taikoo Dockyard & Engineering Co. has an exceptionally large dock. It has been designed to admit of further increasing its length. The dimensions are 787 feet extreme length; 750 feet on the block; 120 feet wide at coping; 77 feet 6 inches at bottom; 88 feet width of entrance at top; 82 feet width of entrance at bottom; 34 feet 6 inches depth over center of sill at high water spring tide; 31 feet depth over all at low water spring tide.

W. S. Bailey & Co. (Ltd.) are shipbuilders and repairers and can undertake the construction of all types of vessels up to 250 feet long, either in wood or steel. The slipway is able to deal with crafts up to 150 feet in length and drawing about 12 feet of water. Particular attention is given to the construction of all types of motor boats for any service.

POSITION OF HONGKONG IN RELATION TO COMMERCE.

The position occupied by the British colony of Hongkong in the world's trade is unique and without parallel. It is a free port except for a duty on wine and spirits; it has relatively few important industries; it is one of the greatest shipping centers in the world; it is the distributing point for all the enormous trade of South China, and about 30 per cent of the entire foreign commerce of China passes through the colony. In 1918, according to the returns of the Chinese Maritime Customs, Hongkong imported from China goods valued at $139,566,705 and exported to that country merchandise valued at $193,494,836, and these figures in no way include the purely local foreign trade, which is very large.

The conditions of Hongkong in its relation to commerce are in every way excellent, and the Government centers all its efforts on fostering trade. The harbor is magnificent and entirely equal to the present demands of foreign and domestic trade, while the future is being anticipated by increased dock facilities, the dredging of the fairways, and other improvements. Following the conclusion of the war immediate attention will be given, it is understood, to the extensive reclamation scheme at Wanchai, which will add materially to the harbor shipping facilities. The majority of vessels are discharged and loaded by junks and lighters, and ships having large amounts of freight to discharge use the docks at Kowloon, equipped with commodious godowns (warehouses). The merchants, both native and foreign, give special attention to the assembling and transshipping of merchandise to and from all parts of the world, and with the world-wide steamship connections at Hongkong the necessity of retransshipments at other ports is reduced to a minimum. In this connection it is of special importance to American shippers to make adequate arrangements at Hongkong with qualified export agents for the rapid transshipment of cargo to other places, whether the merchandise is shipped on through bills of lading or only documented to Hongkong.

As Hongkong is the financial center of the Far East, the facilities for the negotiation of bills, exchange, credits, and other lines of banking business are satisfactory. The Hongkong dockyards are modern and thoroughly equipped to meet all emergencies; the coal depots are large and in normal times the coal is reasonably cheap; the water supply is ample and of excellent quality; and general ship's provisions and supplies can be readily obtained. The water and rail connections with the Canton Delta are equal to the demands of the business. There are no Government charges to be paid on transshipment cargo.

It is necessary that all goods be substantially packed in strong cases, plainly marked, with a statement of contents and final destination.

As regards China cargoes, an invoice giving market valuation must accompany each shipment.

COMPILATION OF HONGKONG TRADE RETURNS.

Early in 1919, for the first time in the history of the port and of British trade in the Far East, official returns were published in Hongkong covering the trade of the colony and British trade in the Orient generally. The import and export department of the colonial government, a bureau formed originally for the purpose of war control of incoming and outgoing commodities, on April 5 issued the trade and shipping returns for 1918 for the colonial government, which represent the first attempt to set forth accurately the trade of the colony. Previous to the war there were no official trade statistics for Hongkong, the only information available in trade lines being that compiled by the Hongkong General Chamber of Commerce or various firms or consulates for their own use, and consisting of figures secured from bills of lading of vessels, without detail and often with little claim to accuracy in any way. With the advent of the war came the necessity of controlling the importation and exportation of certain commodities, and a bureau was established for that purpose.

In 1915 an ordinance was passed by the legislative council requiring import and export permits for all goods, and an import and export department was established to exercise such control. In connection with this war work an effort was made to analyze and record the trade information thus obtained, but it was impossible to do much in this line until the middle of 1917, and the calendar year 1918 is the first entire year for which returns are available.

Great difficulty was experienced in securing accurate information from Chinese and even foreign shippers—linguistic difficulties, the difficulty of adjusting classifications to those of other trading countries and to China, and many other obstacles to success—but it is believed that on the whole the result is not far from the actual facts. The publication is alive with matters of great interest to all concerned in the trade of China and the Far East, and it contains many surprises.

Six years ago the estimated annual turnover of the trade of Hongkong was $250,000,000 gold, but the estimate was considered rather high. Since that time values of all commodities have advanced greatly and trade has increased, and the returns for 1918 give the annual turnover at £127,990,977, or about $622,868,089 gold. This is substantially two-thirds of the total value of all the foreign trade of China in the same year. A little over a third of this total trade is with various parts of China and Formosa; a sixth of it is with Great Britain and various British dominions scattered all over the world; a fifth of it is with Japan; about an eighth of it is with the United States and the Philippine Islands; about a fifth with Indo-China. The division for 1918 according to countries was as follows, in United States currency:

Countries.	Imports from—	Exports to—	Total.
United Kingdom	$21,603,479	$5,413,402	$27,016,881
Australia	6,036,368	1,764,466	7,800,834
Canada	545,973	3,218,898	3,764,871
New Zealand	40,913	199,200	240,113
India and Ceylon	17,549,796	11,077,074	28,626,870
Burma	601,675	1,634,589	2,236,264
Africa	109,817	1,962,752	2,072,569
Straits Settlements and Federated Malay States	13,220,748	15,107,027	28,327,775
British North Borneo	1,463,824	487,565	1,951,389
West Indies		1,287,802	1,287,802
China	45,559,166	180,115,959	225,675,125
Japan and Korea	47,785,482	21,872,402	69,657,884
Netherlands East Indies	6,428,369	7,748,451	14,176,820
French Indo-China	74,405,257	28,490,170	102,895,427
Siam	17,509,351	5,483,743	22,993,094
Philippine Islands	2,649.717	7,319,411	9,969,128
Vladivostok	8,701	1,144	9,845
United States	40,625,805	26,361,801	66,987,606
Central America		717,638	717,638
South America	12,478	4,431,547	4,444,025
France	147,504	1,595,137	1,742,641
Italy	30,513	45,082	75,595
Europe (other)	197,893		197,893
Total	296,532,829	326,335,260	622,868,089

These returns represent rather abnormal trade, and the trade in certain items shows a considerable change. The imports of machinery have been comparatively small, while imports of iron and steel for distribution all over the East have been abnormally large. Imports of certain foodstuffs and other supplies for the Allied forces in the Orient also have affected returns. The trade in lines such as condensed milk has been unusually large, yet unquestionably much of this new trade will become permanent. In some items the war has merely accelerated a movement well marked before the beginning of hostilities and has affected trade routes by diverting shipping, which has not been to the advantage of Hongkong nor resulted in swelling the returns now made.

The greatest difficulty is in securing an accurate measure of the trade of the port. Concerning this phase of the matter the superintendent of imports and exports, Mr. D. W. Tratman, in an introductory note to the report, says:

> Hongkong is essentially an entrepôt where merchandise from all parts of the world changes hands or ships, or both. The colony produces nothing, animal, vegetable, or mineral, of any account from a world-trade point of view. Its local consumption, except in the case of materials for shipbuilding, ship repairing, and ship furnishing, is from a similar relative point of view negligible. There are, it is true, besides shipbuilding, local manufacturing industries of very considerable importance which absorb large quantities of raw or semiraw materials, notably crude tin, raw sugar, and raw tobacco. But the products of the tin and sugar refineries and the tobacco factories are destined almost wholly for reexportation. The returns do not include: (a) Articles imported or exported by the colonial government or naval and military authorities; (b) cargo arriving for transshipment only on through bills of lading, except wolfram ore from South China; (c) cargo, except ores and minerals, arriving from ports in China south of Swatow and from the neighboring Portuguese colony of Macao: (d) a portion of the cargo arriving from the Chinese ports of Swatow, Amoy, and Foochow (described in the returns as Middle China); (e) movements of bullion and specie; (f) cargo landed into warehouses and left unclaimed on December 31, 1918; and (g) ship's stores and bunker coal.
>
> The omissions in (b) and (c) may be found surprising. The reason for (b) lies in the fact that the local firms to whom the goods are consigned for transshipment rarely have sufficient particulars to make anything more than a very general classification practicable. As, however, the whole trade of the colony may be regarded as transshipment, an endeavor will be made in 1919 to compile under broad headings some record of this class of transshipment cargo. The trade in (c) is mainly that passing out of China through the Canton and West River Delta. A large proportion of this traffic is represented by regular lines of river steamers which require to unload and reload for the return journey with as little delay as possible. It would greatly impede the free circulation of this traffic if delivery of inward cargo had to await the issue of import permits, and general import licenses permitting delivery without permits of all inward cargo except ores and minerals have therefore been granted to the agents of these vessels.
>
> If and when conditions allow of the abolition of the present system of import and export permits in favor of a system of declarations directed purely to record keeping, it may be possible to analyze these short-distance foreign imports in the same way as other imports, but under existing conditions the gap in the records for South China is so large that any import figures for this area (except for ores and minerals, for which import permits are required in all cases) would only be misleading. Moreover, the omission is not so serious a defect as it might seem, for practically the whole trade of South China with the world at large passes through Hongkong, and the foreign export trade of this territory, except such portions as are represented by through bills of lading from Canton, is therefore recorded in the export returns of Hongkong. It is, in fact, this omission that explains the apparent excess of the colony's exports of certain articles over its imports (e. g., ginger, lard, wood oil). The difference represents not local production but unrecorded imports from South China.

This great question as to what shall be and shall not be included in Hongkong returns renders it difficult to make accurate and valuable comparisons with other returns. The latest American figures and estimates available indicate that imports from the United States into Hongkong in 1918 had a value of something like $25,000,000, while the Hongkong returns indicate a value of £8,348,054, or $40,625,805 gold. The declared exports from Hongkong to the United States amounted to $33,107,246, while the Hongkong returns credit the United States with having taken goods to the value of only £5,416,994, or $26,361,801 gold.

It seems probable that, aside from the improvements in the scope and nature of the returns which are being made by the imports and exports department of the colonial government for the current year, great changes in some of the principal items will be noted. Present indications are that the trade of Hongkong in 1919 will be as much below normal on the whole as any year recently has been above normal, so that it is likely that it will be several years before the returns can be secured on a basis admitting of reasonable and safe comparisons.

Incidentally the returns demonstrate the widely scattered nature of Hongkong's trade. The impression which obtains generally in the United States that the colony is merely a gateway into and out of South China will not endure long in the face of the fact that the whole of China and Formosa account for only a little more than a third of its trade.

EXPORT TRADE.

While the export trade of China is dependent on the general political situation, still it is less affected by this factor than is the case in any other country. The Chinese are born traders, and political unrest unaccompanied by civil revolution does not always give rise to economic depression. In a way it can be considered that the export trade of the colony is only another form of the import trade, for the business of Hongkong is largely that of a central clearing house. As a rule the exports from Hongkong follow well-determined lines, and the variations in the quantities shipped depend on the demand of European and American markets. Unsettled political conditions in South China and the course of exchange when the price of silver is high have marked influence on the volume of business, but no doubt a fluctuating low exchange is still more detrimental than a fairly steady high exchange. It is indeed fortunate for the South China producer that foreign countries at present need some of the staple articles from this market and pay prices far above the normal market values.

The leading products shipped from Hongkong to all parts of the world are: Antimony regulus, star aniseed, bamboo and bamboo ware, bamboo shoots, beans, bristles, canes, cassia, chinaware, Chinese medicines, Chinese boots and shoes, Chinese tobacco, Chinese drugs, dried fruits, feathers, firecrackers and fireworks, fire-clay products, embroideries of all kinds, galangal, ginger, hides, human hair, incense sticks, dried lichees, dried lily flowers, mats, matting, gallnuts, vegetable oils, essential oils, palm-leaf fans, prepared fish products, peanuts, rattan core, rattan furniture, rice, sea-grass furniture, soy, tapioca flour, tea, tin in slabs, and walnuts.

IMPORT TRADE.

In contradistinction to the export trade of Hongkong, which follows fairly definite lines, the import trade is broadening from year to year as the necessities and demands of the Chinese are developed. The war has radically changed the commercial situation, and to-day American trade has expanded and developed in ways that previously were not considered possible. During the war the United States was the only remaining neutral country from which the Chinese could obtain articles that were formerly furnished almost entirely by European countries, and consequently America at once became a tremendous factor in the commercial development of China. Never before has the interest of American manufacturers and exporters been thus stimulated in relation to the possibilities of Far Eastern markets, and to-day this awakened interest is manifested in the establishment of new firms in Hongkong and China generally. New steamship lines have been launched in the trans-Pacific trade and others are in process of establishment, and it seems evident that American firms are determined to consolidate connections already in being and to develop and strengthen these against the impending competition of European countries.

Many commercial writers of late, in discussing the potentialities of China and the best methods of reaching the trade by direct channels, have advocated the elimination of the Chinese comprador as one of the first steps to be undertaken. In theory this is a splendid idea, but in order to do away with the present system a substitute must be found for the Chinese middleman and none is ready at hand. China differs from most other countries in that importers of Chinese goods do not, except in rare instances, deal directly with Chinese producing firms, factories, or mines. The difference in language and customs, the poverty of China, and its imperfect foreign banking facilities are responsible for this state of things. Force of circumstances compelled the European houses in the early days of the trade with China to employ the comprador in all negotiations, and to this day the system, with its confessedly great drawbacks, is deep-rooted, and its elimination will be a slow, though not an impossible, process. The number of foreigners in China who speak the language and the various dialects and understand the complexities of Chinese methods in trade are very few indeed, and although attempts are being made to remedy this state of affairs, particularly in the formation of schools for studying the Chinese language, it will be years before any real ultimate benefit can be obtained. It is no doubt true that present methods are antiquated, costly, and a great obstacle to close connections with the Chinese, but foreign merchants without their own establishments in China must place themselves in the hands of well-known houses that protect their indirect dealings with the natives through compradors. It is not advisable for the American houses to make direct connections with the Chinese buyers unless the conditions are favorable and unless there is a thorough knowledge of their customers' responsibilities. It is therefore infinitely better to follow the recognized and unquestionably safer custom until it has been proven that direct trading is safe and practical.

In the majority of cases the American manufacturers and exporters are not specific enough when writing to American consuls for information concerning the possibilities of a market for a line of American products. It would be of the greatest assistance for consuls to be furnished full information concerning the financial standing and business responsibilities of the American house (with bank references), details as to the goods manufactured, price lists, free samples, and such other information as will enable the consul to approach interested parties with sufficient data to give the possible importer a good working knowledge of the article. If the American firm is represented elsewhere in the Orient the consul should be so informed, and—what is equally important—if inquiries are sent to several consuls this fact should be noted. In other words, the consul should receive the same amount of information as the manufacturer or exporter would expect to receive from any inquirer in Hongkong or elsewhere.

Among the principal imports from America are petroleum products, flour, lumber (used very largely in the Hongkong industries), food products, metals, and canvas.

Particular attention is called to the following articles, which at the present time are being sought from the United States: Alcohol (94 per cent American proof), bedsteads, boots and shoes, belting, carbonic acid gas, chemical products, electrical accessories, explosives, glassware and glass bottles for chemists, haberdashery, hardware, metals, knitting machinery, ladies' dress accessories, lead, leather for boots and shoes and for bookbinders, motor engines, packing for engines, paints, powder for Chinese ink, quicksilver, tinned plate, umbrellas, wire rope, and varnishes.

TRADE BETWEEN HONGKONG AND UNITED STATES DURING 1918.

The trade between Hongkong and the United States during the calendar year 1918 constituted almost the whole oversea trade of the port in many of the principal lines. The principal supplies of the country depending upon Hongkong and the principal exports of the same territory came from and went to the United States in larger volume than in the case of any other country.

The value of imports from the United States during 1918 is estimated at about $25,000,000, as compared with an estimated value of $16,500,000 for the previous year.

The value of exports from Hongkong to the United States in 1918 was $33,107,246, as compared with $25,548,413 in 1917, $15,407,690 in 1916, and much smaller amounts in previous years. Exports to the Philippine Islands in 1918 were valued at $6,739,044, as against $6,657,851 in 1917. Exports to Hawaii amounted to $366,903 in 1918, as against $509,859 in 1917. The total exports from Hongkong to all American territory, therefore, were valued at $40,213,193 in 1918, as compared with $32,716,123 in 1917. The following table shows the details of this trade:

Articles.	1917	1918
TO UNITED STATES.		
Antimony	$161,523	$97,386
Antiques	84,451	12,768
Breadstuffs: Rice	10,123,819	12,028,280
Bristles	223,850	443,078
Chemicals	335,857	461,952
Cotton, and manufactures of	41,358	13,742
Earthenware and chinaware	124,940	47,561
Edible substances	107,537	8,049
Explosives: Fireworks	77,749	19,244
Feathers	113,203	50,604
Fibers	168,329	357,065
Fish	342,394	87,978
Fruits and nuts	1,176,512	699,760
Ginger, preserved	106,140	24,487
Hair, and manufactures of	250,978	142,555
Hides	838,300	193,534
Leathers	39,160	16,554
Meat and dairy products	134,931	168,509
Moss and sea-grass furniture	26,801	....
Oils:		
Peanut	302,706	230,145
Aniseed	254,833	45,355
Cassia	124,503	124,465
Wood	....	1,185,295
Paper, and manufactures of	85,711	30,890
Seeds	41,812	10,319
TO UNITED STATES—con.		
Silk, and manufactures of	$303,243	$74,329
Spices:		
Cassia	349,968	434,329
Pepper	216,956	....
Spirits, wines	207,254	50,340
Sugar	51,497	52,359
Tea	288,416	139,987
Tin	6,670,074	10,299,203
Tobacco	461,474	132,751
Vegetables	486,294	112,392
Wolfram	93,081	4,808,358
Wood:		
Unmanufactured	314,582	201,311
Manufactured	222,497	35,290
All other articles	595,680	327,081
Total	25,548,413	33,107,246
TO PHILIPPINE ISLANDS.		
Animals: Cattle	15,321	19,186
Breadstuffs: Rice	1,584,738	1,657,724
Cement	106,281	106,540
Chemicals	96,428	105,162
Cotton, and manufactures of	944,860	575,708
Earthenware and chinaware	74,226	62,649

Articles.	1917	1918
TO PHILIPPINE ISLANDS—con.		
Eggs	$389,244	$548,323
Fibers	295,758	249,192
Fish	148,676	168,309
Fruits and nuts	177,202	210,513
Glass and glassware	25,657	13,544
Matches	228,038	149,837
Meat and dairy products	374,654	411,434
Metals, and manufactures of	49,978	17,973
Motion pictures	7,692	3,609
Oils:		
Mineral	....	379,568
Peanut	122,594	118,998
Paper, and manufactures of	66,870	54,193
Salt	124,577	49,364
Silk:		
Unmanufactured	492,939	583,594
Manufactured	87,872	74,006
Straw, and manufactures of	9,874	9,436
Sugar	18,680	12,140
Tea	25,742	20,874
Tobacco	15,672	20,562
Vegetables	186,927	258,020
Wood, and manufactures of	68,630	63,069
All other articles	918,741	795,518
Total	6,657,851	6,739,044

Articles.	1917	1918
TO HAWAII.		
Breadstuffs: Rice	$9,006	$43,085
Chemicals	22,074	23,757
Cotton, and manufactures of	4,814	2,886
Earthenware and chinaware	10,284	2,884
Edible substances	5,739	3,663
Eggs	12,765	12,163
Explosives: Fireworks	8,778	4,089
Fish	62,132	49,636
Fruits and nuts	40,927	33,834
Meat and dairy products	28,975	47,606
Metal	2,101	1,280
Oil, peanut	58,525	22,678
Paper	6,948	5,337
Seeds	4,378	4,615
Silk, and manufactures of	23,457	8,716
Spirits, wines	62,446	....
Straw, and manufactures of	5,310	2,954
Sugar	2,817	3,109
Tea	32,161	18,750
Tobacco	11,449	11,704
Vegetables	43,825	30,349
Wood, and manufactures of	9,727	3,450
All other articles	41,221	30,358
Total	509,859	366,903

In order to afford a basis of comparison between the present trade and the prewar conditions, the following table is given, showing the value of the declared exports from Hongkong to the United States and its possessions during 1913, the last normal year before the beginning of hostilities; it will be noticed that the value of the shipments to the United States increased *636 per cent* from 1913 to 1918:

Articles.	Value, 1913.
TO UNITED STATES.	
Anise seed	$1,210
Anise-seed oil	93,199
Antiques	16,112
Bristles	25,807
Camphor	3,647
Cassia	158,263
Cassia oil	67,696
Clothing	26,695
Earthenware and glassware	46,938
Embroideries	46,272
Fireworks	11,188
Human hair	128,037
Medicine (Chinese)	76,400
Metals and manufactures	33,871
Paper and manufactures	21,235
Peanuts	79,310
Peanut oil	154,861
Provisions	584,835
Rattan and manufactures	77,653
Rice	1,111,311
Sea-grass furniture	102,836
Shoes (Chinese)	48,488
Silk piece goods	18,634
Soy	51,595
Sugar (refined)	35,121
Tea	125,934
Tin slabs	1,632,213
Tobacco	51,939
Wine (Chinese)	140,200
Wood and manufactures	27,389
All other articles	205,091
Total	5,203,980

Articles.	Value, 1913.
TO PHILIPPINE ISLANDS.	
Anise seed	$422
Anise-seed oil	3,418
Cement	160,289
Cinematograph films	49,465
Clothing	10,312
Cotton piece goods	172,256
Cotton yarn	101,636
Earthenware and glassware	41,662
Fireworks	4,410
Fruits and vegetables	98,089
Lard	63,335
Matches	36,392
Medicine (Chinese)	44,462
Metals and manufactures	147,618
Paper and manufactures	10,639
Peanuts	71,261
Peanut oil	87,341
Provisions	627,470
Rattan and manufactures	21,455
Rice	1,018,198
Silk piece goods	48,000
Silk (raw)	226,253
Shoes (Chinese)	3,509
Soy	1,430
Sugar (refined)	149,498
Tea	16,979
Tobacco	8,268
Wine (Chinese)	465
Wood and manufactures	50,007
All other articles	249,722
Total	3,524,261

Articles.	Value, 1913.
TO HAWAII.	
Cassia	$321
Cement	1,034
Clothing	1,842
Earthenware and glassware	4,550
Embroideries	442
Fireworks	6,523
Human hair	14
Medicine (Chinese)	12,994
Metals and manufactures	3,591
Paper and manufactures	4,828
Peanuts	170
Peanut oil	29,302
Provisions	167,710
Rattan and manufactures	886
Rice	12,181
Sea-grass furniture	300
Shoes (Chinese)	5,528
Silk piece goods	2,381
Soy	1,140
Sugar (refined)	1,563
Tea	27,371
Tin slabs	94
Tobacco	8,901
Wine (Chinese)	49,238
Wood and manufactures	1,864
All other articles	25,128
Total	369,896

Exports from Hongkong to the United States during 1919 depend very largely upon the price of silver, which promises to be high and to tend greatly to restrict exports.

On the other hand, imports of an infinite variety are needed throughout the South China field and will be purchased to the full extent of the country's economic credit.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

The steamship connections between Hongkong and the Atlantic and Pacific coast ports of the United States may be summarized as follows:

TO EASTERN SEABOARD OF UNITED STATES.

The American Asiatic Steamship Co. has monthly sailings, via Suez, Panama Canal, or Cape of Good Hope as circumstances demand.

The China Mutual Steam Navigation Co. (Blue Funnel) has had seven boats in this trade sailing via Suez, Panama Canal, or Cape of Good Hope as circumstances demand.

In the summer of 1919 announcement was made of a joint service from Hongkong to New York on the part of the Blue Funnel and the American-Manchurian line of the Ellerman & Bucknell Steamship Co.—providing for a sailing at least once a month, by the Suez or the Panama Canal, at ship owners' option.

Other occasional sailings to New York number approximately 10 a year.

There has been opened in Hongkong a direct agency of the Barber Steamship Co., of New York.

TO SAN FRANCISCO.

The Toyo Kisen Kaisha has eight boats on this service and four on the South American run calling at San Francisco; approximately biweekly sailings.

The Robert Dollar Co. has three boats in addition to four or five chartered boats. The total number of sailings probably does not exceed 10 a year.

The China Mail Steamship Co. has one boat on this run, with four or five trips a year.

The Standard Oil Co. of New York has an occasional boat returning to San Francisco with space for some cargo.

W. R. Grace & Co. have a small number of boats that have been making a number of trips between Hongkong and San Francisco.

The Pacific Mail Steamship Co. (under organization of American International Corporation) has three boats giving approximately 12 sailings a year.

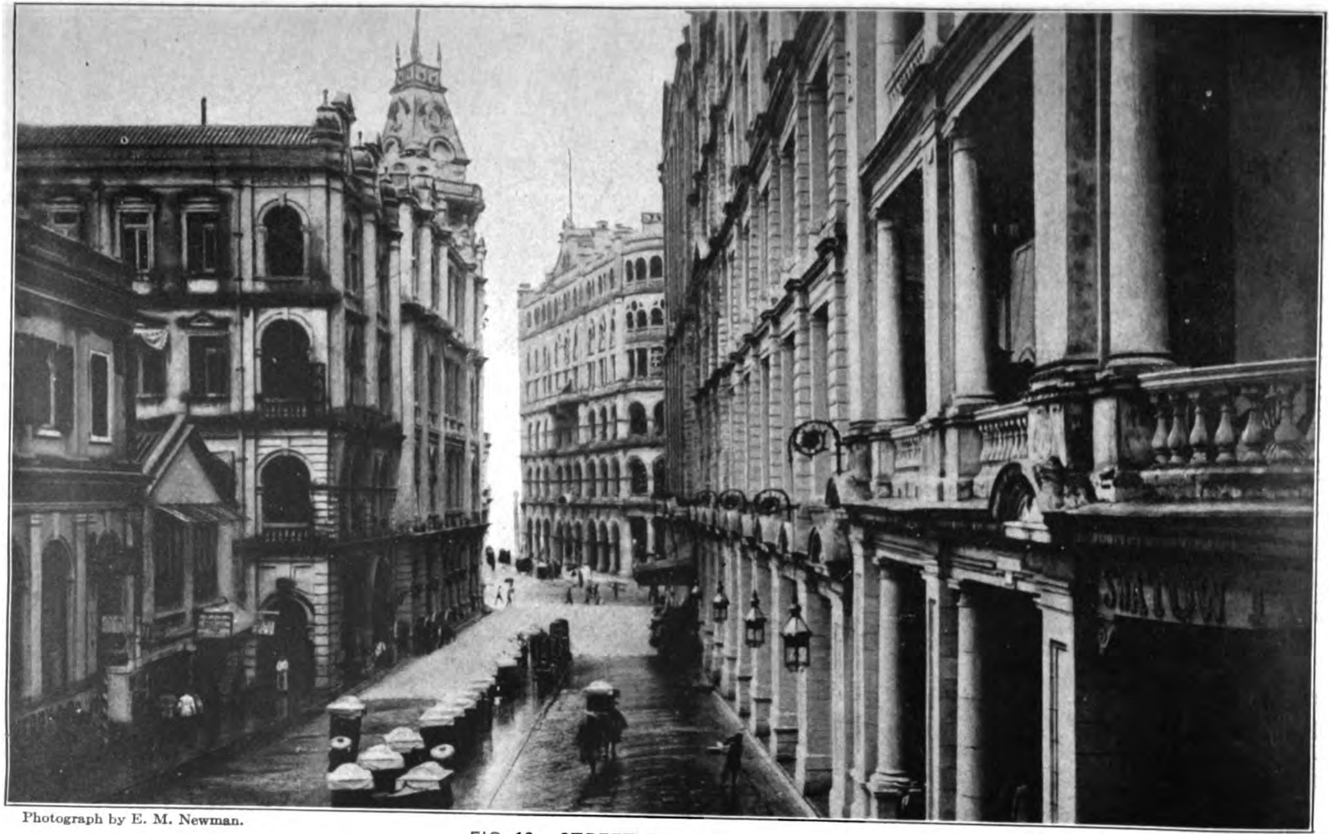
The Hawaiian-American Steamship Co. will probably have four boats between Hongkong, Honolulu, and San Francisco.

The U. S. Shipping Board has steamers sailing every 28 days from San Francisco to the Orient and touching at Hongkong.

TO PUGET SOUND PORTS.

The Ocean Steam Navigation Co. (Ltd.) (Blue Funnel) has approximately 12 sailings a year between Hongkong and Vancouver and Puget Sound.

The Canadian Pacific Ocean Services (Ltd.) has about 22 sailings a year between Hongkong and Vancouver.



Photograph by E. M. Newman.

FIG. 18.—STREET SCENE IN HONGKONG.

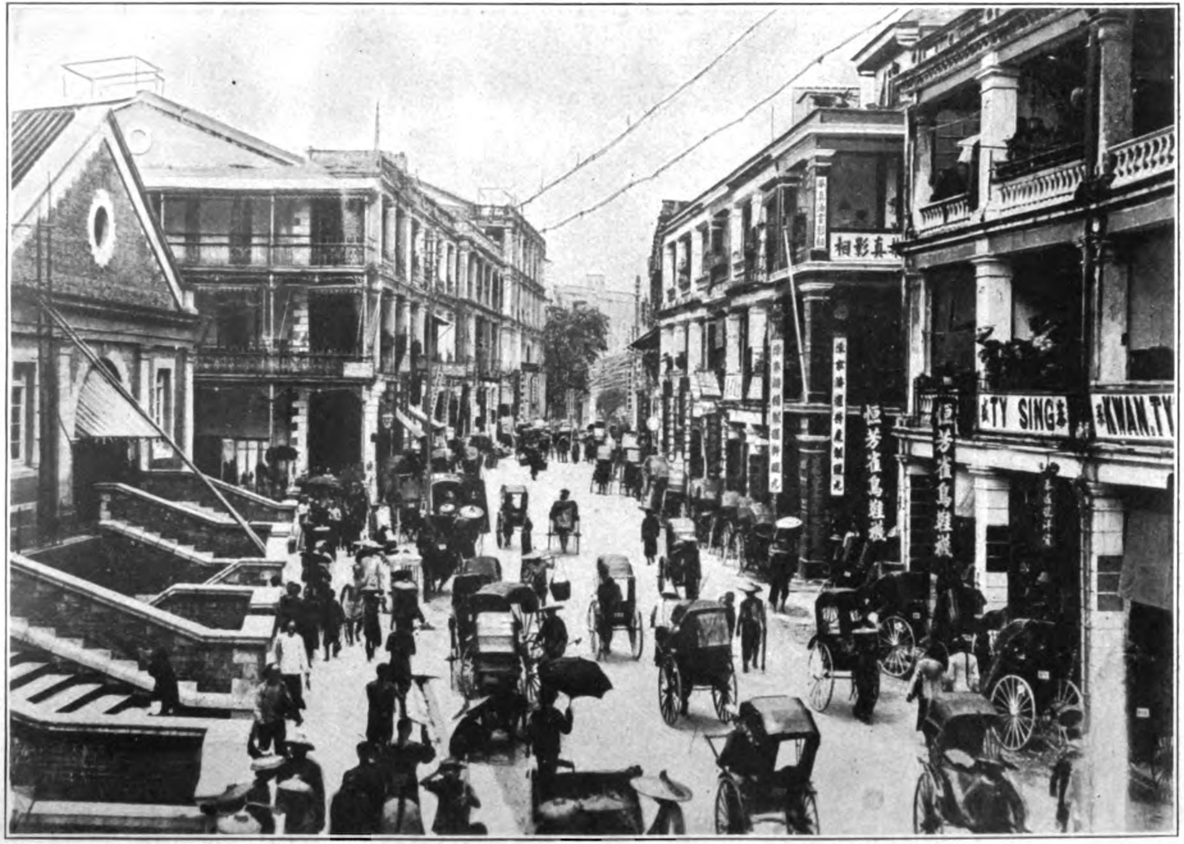


FIG. 19.—ROAD IN CENTRAL PART OF HONGKONG.

The Osaka Shosen Kaisha has 24 sailings a year to Puget Sound ports.

The Nippon Yusen Kaisha has 24 sailings a year to Seattle and 4 boats from Hongkong, Manila, and Japanese ports to New York via Panama.

The Royal Mail Steam Navigation Packet Co. ordinarily has about 24 sailings a year to Vancouver and Seattle.

The U. S. Shipping Board has steamers sailing about once a month from Seattle to the Orient and touching at Hongkong.

A number of tramp steamers are also on the run to Seattle, but the departures are irregular.

FACILITIES FOR TRAVEL.

Hongkong is well provided with hotels and boarding houses, and in a general way they are considered to be quite good. The rates per day in the leading hotels average $7 or $8 gold, and monthly rates for two persons average about $125 to $150. The best season for visiting Hongkong and South China is from October to the end of February or the middle of March. The traveling accommodations by sea are excellent, and in normal times quick connections can be made at Hongkong for the Straits Settlements, India, Europe via Suez, the Philippines, and Australia. There are daily boats for Macao and Canton and three or four sailings weekly to Manila. The Kowloon-Canton Railway has good service to Canton, the run of 100 miles taking, on express trains, something less than five hours. The hotels in Hongkong have launches to meet all incoming steamers. Thomas Cook & Sons have a launch. The American Express Co. is located in Hongkong and pays particular attention to the tourist traffic and the forwarding of baggage to America. All Americans traveling to the Orient should have in their possession a passport and other documentary evidence for identification. Passengers, before leaving the United States, will find it a great help if information is obtained from the proper customs authorities regarding the amount of goods, curios, and the like that can be taken back with them without duty charges.

TRADE ORGANIZATIONS IN DISTRICT.

The chambers of commerce in the Hongkong consular district are the Hongkong General Chamber of Commerce, the Chinese Chamber of Commerce, and the Association of Exporters and Dealers of Hongkong.

The Chinese trade guilds are: Hongkong Money Dealers' Guild, comprising the native banks; Wa On Club, or Californian Merchants' Hong, comprising the firms that export goods to the United States; Business Association of the Commission Agents' Guild; Copper and Iron Dealers' Guild; Silk and Satin and Piece Goods Guild; Min Yik Kung Wui, Cotton-Yarn Dealers' Guild; Ginseng, Deerhorn, and Drugs Guild; Foreign Goods Import and Export Guild; North and South Merchants' Guild, comprising firms doing business in imports and exports with Northern Chinese ports, French Indo-China, Straits Settlements, and Java; Raw-Drug Dealers' Guild; Rice Guild; Salt-Fish Wholesale Dealers' Guild; Vermilion and Dye Dealers' Guild.

AMERICAN INTERESTS.

Since the outbreak of the war American trade in the Orient has increased enormously in many lines, particularly in those formerly supplied by Germany, Austria-Hungary, and Belgium, and in certain other classes of merchandise, notably iron and steel, which Great Britain and other European countries have been unable to supply fully because of the situation in manufacturing circles in these countries. Perhaps the most notable development in the oriental trade of the United States has been in iron and steel products, certain lines of hardware, electrical accessories, window glass, glassware, chemical products, tin plate, lead, quicksilver, nails, wire rope, belting, and related articles.

The American manufacturers are now in the Chinese markets and in many lines have obtained a strong foothold, with encouraging prospects for the future, but the restoration of peace in Europe and the return to normal conditions will mean the necessity of meeting competition (which will be very keen) and the natural desire and pressing economic need of those countries, now practically out of the Chinese market, to return with a strong determination to resume their proportion of trade. The United States has obtained trade in many lines through the sheer inability to obtain supplies from former sources, and under the circumstances it seems imperative that American firms should use every effort to consolidate their trade.

Irrespective of the abnormal conditions prevailing in Europe, the Chinese trade during portions of certain recent years was below normal in some lines and above normal in others, because of purchases by Japan of war material for Russia; but upon the resumption of a settled status of affairs there will be an increased demand for many lines of goods which the United States should supply advantageously even in the face of European competition. The purchasing power of the Chinese people is small individually, but the volume of trade collectively in the cheaper grades of goods will be tremendous, and it only remains for Americans to determine whether they will meet these conditions as well as or better than European countries. In a general way the stocks on hand in Hongkong and South China and in the Orient generally are much depleted, and the opportunity for American manufacturers and exporters to redouble their efforts to capture this trade is unprecedented. It is unfortunately true that many American manufacturers who now have a considerable export trade to China are in no way attempting to consolidate their trade and intimate that when the domestic trade increases the exports to China will be discarded for the apparently more profitable trade at home, with fewer risks and less unusual demands. Other exporters are not in a position to care for the volume of trade in China offered at present, but those who have obtained a foothold ought to follow up the advantages already obtained even in the face of domestic demands or the business in South America.

GENERAL TRADE SUGGESTIONS.

One of the important features of American development in foreign trade in recent years, and particularly since the outbreak of the war, is the increasing disposition of American concerns to establish their own branch houses or send out their own agents into the foreign field. This feature is particularly notable in the South China trade, of which Hongkong is the distributing and financial center. So far as China is concerned there is a greater tendency on the part of American firms to deal more directly with Chinese firms, thereby avoiding middlemen, but the experience of other countries is perhaps not altogether favorable to direct connections with the Chinese. The sending out of representatives by American firms has been much more common than formerly, and these men have been responsible for much of the advance in American foreign trade. They are in a position to get into direct touch with the ultimate consumer and thus can inform their principals of the real needs of the market. In respect to credits there was formerly a disposition on the part of American firms to insist upon stringent credit terms, but it seems apparent that they are more inclined these days to meet the wishes of the importers in the same way that other countries do.

Suggestions as to the best method of reaching the Chinese market through Hongkong offer a field for a variety of comment and advice. In general the American manufacturer and exporter must arrive at the proper solution of the best means for extending trade in this field in accordance with the nature of the article to be exported, for in some respects the conditions vary in China more than in other parts of the world. It is thought that no field in the world's trade requires more preliminary investigation and personal attention than that of China, and a study of the best methods to be finally adopted is of primary importance.

There are certain essential facts to be learned in the Chinese trade before any attempt should be made at all. In the first place the Chinese are essentially a very conservative people and in a general way are not at all inclined to buy abroad articles that are not within their knowledge; in other words, it is an extremely difficult undertaking to interest the Chinese in articles that are not in every respect utilitarian. Since they are such a practical race, trade novelties of unknown selling power and adaptability to the limited means of the people can not readily find a market, and without a thorough demonstration of the practicability of such articles and proof of future need the Chinese can not be induced to initiate their introduction. Again, the low individual purchasing power of the millions of Chinese must not be lost sight of. To express this fact in another way, it is estimated that the direct purchasing population of China is only about 8,700,000 people (the estimated population of the 46 treaty ports) out of a total estimated population of 445,873,000. The total European population of China in 1915 was 182,404. For 1912 the value of the exports from the United States to China was about $23,000,000, a very small percentage of the total import trade, which amounted to about $360,000,000. It must not be forgotten, however, that China is a country of great natural resources; its mineral riches are very largely undeveloped, and the railways reach only well-known regions, following generally and imperfectly the lines of communication and trade that have been in existence for ages. It remains to be seen whether China will go through a period of development like that of Japan, but in any event American manufacturers are particularly well qualified to meet the demands of China in the future. It seems evident that sooner or later China must come into its own, and when that time arrives the possibilities are beyond present contemplation. This process will, however, be necessarily slow. Manufacturers and exporters should understand that American goods stand well with the Chinese, and although there is a natural tendency among the British and other foreign firms to foster their own trade in every way possible, it is also true that the Chinese are desirous of buying in the cheapest and best market and that the origin of goods is immaterial to them if all other things are equal.

METHODS OF ENTERING MARKET.

There are three more or less distinct methods of entering foreign trade, and the question arises as to which of these is best adapted for the Chinese field, all things being considered. The recognized methods are: First, selling direct—that is, the direct exploitation of the foreign market through salesmen, branch houses, exclusive dealers, or through the mails, the last-named method not being very effective except as an adjunct; second, selling through a manufacturer's agent; and third, through export commission houses. All these methods are employed in the Hongkong trade, and in the case of American manufacturers and exporters the general custom in the past has been to grant exclusive agencies to American or foreign firms established either in Canton or Hongkong, principally the latter place. In a general way it appears to the writer that the best method to adopt is the first, but naturally the class of goods in each case must determine to a certain extent the final selection of ways and means of entering the Chinese markets. Previous to the European conflict the general practice of American firms was to place their agency in the hands of some firm with exclusive rights for Hongkong and South China, but now the tendency is to establish their own connections. This method is, of course, impossible for many manufacturers in the United States because of their inability to finance their undertaking alone, and in that case recourse should be had to export agents or the granting of exclusive rights to American firms now established in the Orient. British and other European firms have their own establishments in China, and although they are willing and anxious to represent American houses it is very rarely that an American house ever represents either British or Continental firms in the Orient. It is not implied that foreign firms are not fair and just in their treatment of American goods, but national pride and a natural desire to foster and favor the trade of their respective countries (notably in the case of Japan, the most energetic nation operating in China) often retard the legitimate extension of American trade.

The export commission houses in the United States are a valuable adjunct in trade propaganda in the Far East, and they are in a position to serve advantageously many firms that are not strong enough to finance their own undertakings. These houses have qualified men traveling abroad and are in touch with foreign markets in general. If a manufacturer desires to use a commission house located in Hongkong or China proper, it is necessary and essential to assist it in every way to introduce the goods properly and efficiently, supplying liberal samples and in some lines allowing an appropriation for advertising. There will be no necessity to make a study of customs rules and regulations in Hongkong, since it is a free port. The import duty into China is, in general, 5 per cent ad valorem.

ADVERTISING AND SAMPLES.

In connection with the selling campaign in foreign countries the question of advertising must be studied in order that the needs and requirements may be met at the beginning. It is not believed that advertising in the native language is as important as in most other countries. Catalogues, photographs, and descriptive literature do not appeal to the native population of China in the same way as elsewhere, although it is not implied that advertising in China is a waste of money, for along certain lines it is certainly beneficial. To the average Chinese buyers the splendidly illustrated catalogues do not appeal particularly, for they are unable to grasp the significance of these in the same way as purchasers in the United States, where the people have been taught to study and understand this method of reaching the people. The Chinese will buy articles other than those that are standard and well known only through samples placed before them. This is a definite requirement on their part,. and it will be found almost impossible to obtain success in any other way than through actual demonstration. The requirement of many American manufacturers to be paid for samples is the means of stopping all possible business, and whatever the method employed by American firms in the Chinese trade they must be willing and glad to furnish all needful samples without charge.

FINANCING OF SHIPMENTS.

As regards credits, which constitute the very marrow of the export trade, there are a number of ways of financing the export shipments. They may be enumerated as follows: (1) Cash in New York or cash with order; (2) cash against documents; (3) sight draft; (4) 30 days' sight, 90 days' sight, and 120 days' sight; (5) long-time credits with interest; and (6) open accounts or open credits. So far as the trade in China is concerned it is essential for steady development to adopt the long-term credit, as that is and has been the usual method, and the American manufacturer must be prepared to finance his shipments on the basis of 90 days' sight or longer. It can not be argued that the present conditions under which foreign buyers are willing to pay cash in New York will continue after affairs in Europe are again on a normal basis. The conditions of foreign trade at present are extraordinary.

GENERAL CONDITIONS GOVERNING AMERICAN TRADE IN CHINA.

In entering the Chinese market it is essential that a preliminary study of the trade be first made in order to determine whether a given commodity is suitable for the Chinese. In South China it would be useless to attempt to introduce stoves for heating purposes, or the modern American plow for agricultural purposes. Heavy woolen goods would find no market there, but light fabrics suitable for the Tropics would have a steady sale. Articles that deteriorate in transportation must not be considered for this market unless suitable packing can be effected—for example, hermetically sealed tins for crackers, candies, and the like. Therefore a careful study of the demands must be made before one attempts to participate in the Chinese trade.

The tendency on the part of American firms to expect immediate results is one of the chief causes of poor returns. The Chinese can not be hurried, and often the native buyers will refuse a cheaper and better article, similar to that which they have been purchasing, simply because the "chop" or distinguishing symbol is new and strange. It should be the aim of every manufacturer to introduce his goods effectively, establish a reputation, and familiarize the Chinese with his trade-mark; it is almost certain, then, that a profitable trade will follow. It takes time, patience, perseverance, and sometimes a very large outlay to obtain Chinese trade, but when a concern has established a reputation for just business dealings and consistent character in goods, a lasting market is assured if prices and quality are acceptable. In the establishment of connections through agencies, particularly with foreign firms, American houses have often failed to realize that it is necessary to establish their own financial standing before they can ask for representation in Hongkong and especially before they can ask the local commission firms to establish their credit standing. Hongkong business houses can not be expected to tie themselves up with firms concerning whose responsibility they know little or nothing; and it follows that local houses will hesitate to seek connections in the United States and forward samples, quotations, and similar information without some indication of the nature and extent of the American houses, their stability and general reputation.

MUKDEN CONSULAR DISTRICT.

By Consul General P. Stewart Heintzleman.

LOCATION AND AREA.

The greater part of the Mukden consular district is situated in Fengtien Province between latitudes 40° and 44° north, corresponding to Pennsylvania, New York, and the New England States. Fengtien is the southernmost of the three Provinces constituting Manchuria. Mukden, the capital of Manchuria and the seat of government of Fengtien Province, lies in 123° east longitude and 42° north latitude, so that it is practically on the same parallel as Boston and Chicago.

The area of this district is about 88,900 square miles, or twice the size of Pennsylvania. It comprises the Province of Fengtien, except the "circuit of the three eastern marches" (Antung consular district) and the leased territory of Kwantung (Dairen consular district), and includes also the southern portion of Kirin Province.

POPULATION.

The population is about 10,156,000, or 114 persons to the square mile, the district thus having about the same density of population as Ohio. It is estimated that not more than a tenth of the population consists of the original stock of Manchus, the great majority being immigrants from Shantung and Chihli and their descendants. It is estimated that three-fourths of the population is rural.

PHYSICAL FEATURES.

The western part of the district is made up of the valley of the Liao River and its tributaries; the eastern part is mountainous, like parts of New York and Pennsylvania. To the southeast lies the Changpei Mountain Range, from which radiate many branch ranges. This mountain range has peaks 3,000 to 6,000 feet above sea level. Mukden is 320 feet above sea level on a flat agricultural plain. This plain, which is 45 miles long and 45 miles wide, has an area of 2,000 square miles.

CLIMATE.

The climate is not affected by oceanic currents, and the wide plain has no protection from the winter blasts that sweep down from Mongolia. The temperature sometimes rises in summer to 96° F., and falls in winter to 25° F. below zero, yet the atmosphere is so dry that the sensations rarely indicate such extremes. The rainfall, including snow, is 33 inches, and is spread over 70 days. The snowfall is not heavy. On the whole the winter months are favorable to health. The atmosphere is clear, dry, and bracing. As spring approaches, the changes of temperature are great and sudden. In March high south winds prevail, at which season duststorms are frequent. In summer the atmosphere is very dry. The heat is greatest toward the end of July—the temperature during the day ranging generally from 91° to 96° F., but during the night being rarely above 75° F. The heavy rains usually begin early in August, and toward the end of the month the weather is cooler.

POLITICAL SUBDIVISIONS.

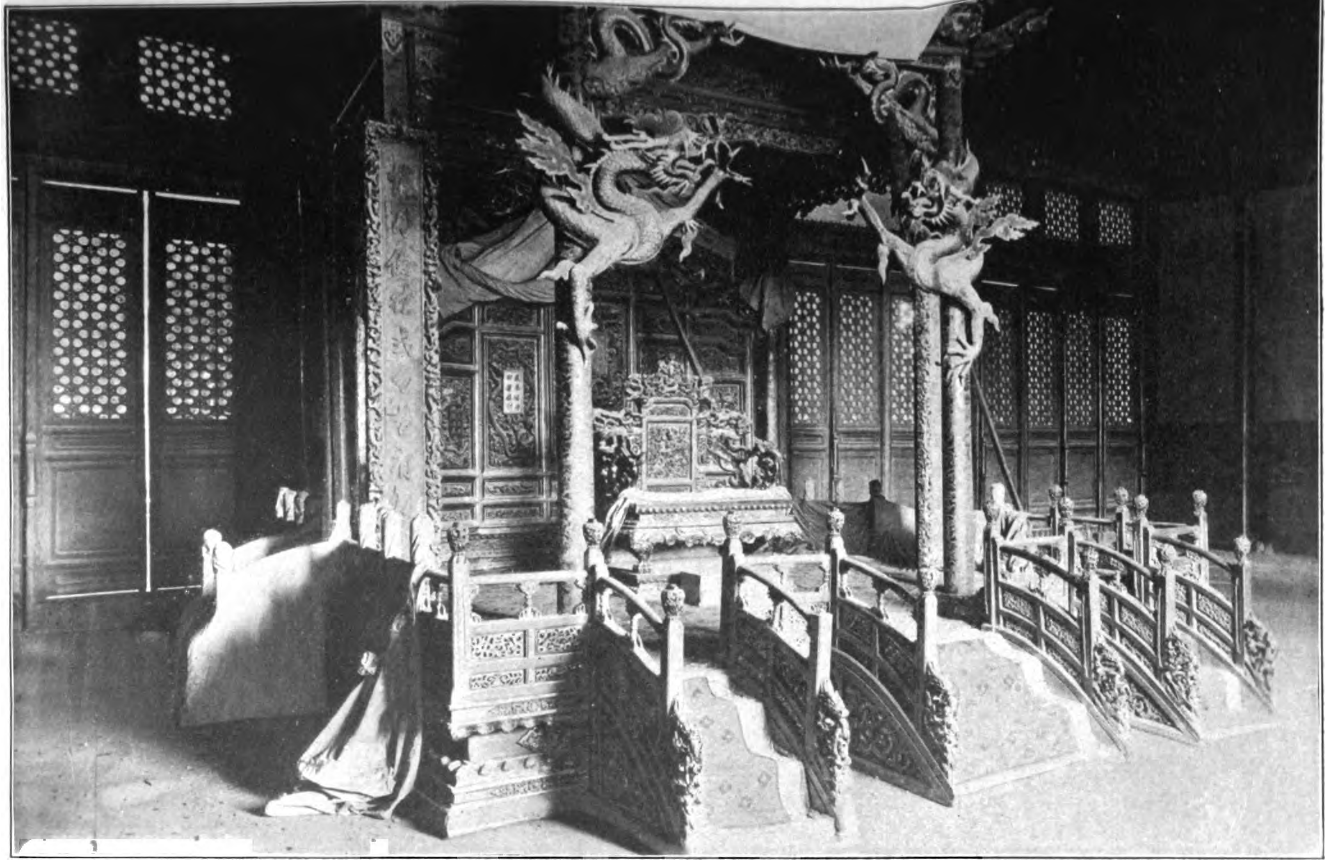
The military governor general for all Manchuria resides at Mukden. There are also in Mukden a civil governor for Fengtien Province and six provincial commissioners—interior, finance, education, justice, foreign affairs, and bannermen's affairs. In addition, a "taoyin" is in charge of a bureau of agriculture, industry, and commerce, while another officer of the same rank is in control of the police administration, which is merged in the department of interior. There are 53 magistrates in Fengtien Province. Questions affecting foreign interests at Mukden are dealt with directly by the commissioner of foreign affairs, who is also special delegate of the foreign office at Peking. Special delegates are also appointed at Newchwang, Liaoyang, and Tiehling. Kirin is the seat of the provincial government of the like-named Province, and in that city, as well as in Changchun, there is a special delegate for foreign affairs. Owing to the many special rights granted Japanese subjects in the Sino-Japanese treaty respecting South Manchuria and Eastern Inner Mongolia, signed May 25, 1915, the provincial government has established at Mukden a separate bureau for the purpose of dealing with the questions constantly arising thereunder.

EDUCATION.

GENERAL SITUATION.

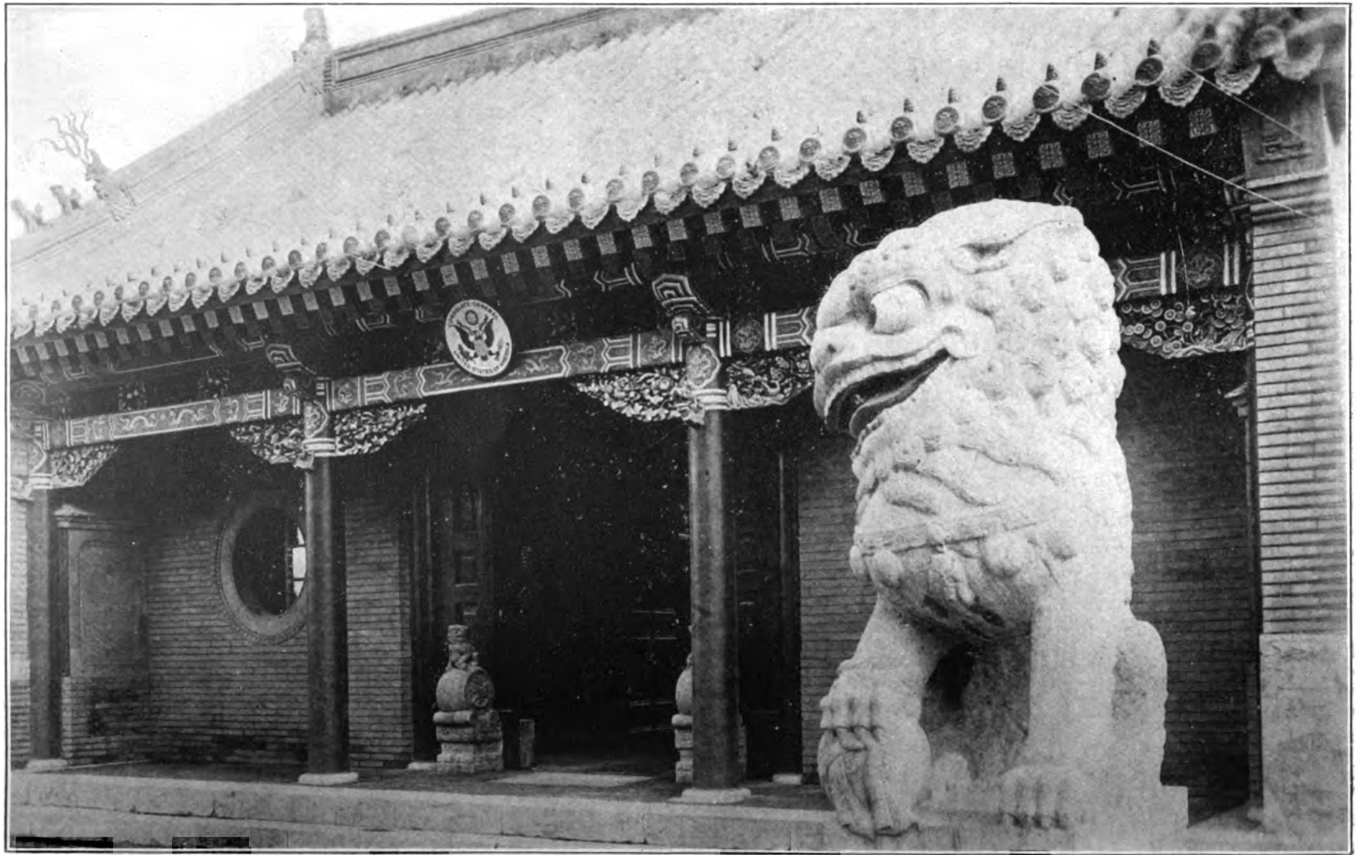
Before the promulgation of the imperial edict of September 2, 1905, inaugurating educational reforms, inadequate funds and the absence of a fixed policy militated against the successful establishment of government schools. After the issuance of this edict, however, education received an impetus. Several colleges and many schools (chiefly elementary and middle), including normal and elementary schools for girls, were established. Candidates for official employment were required, in addition to possessing a knowledge of the ancient classics, to have some acquaintance with the modern science of government. Many young men went to Japan. The antiquated schoolmaster was dismissed. A vast educational scheme, embodying the new aims and methods, was framed by the government. Primary schools sprang up. High schools and training colleges for men and women were established. Schools of law, science, agriculture, industry, mining, surveying, and languages were founded. An educational tax was imposed on the people. Temples were converted into seats of learning. New school buildings were erected. Expert teachers from Europe, America, and Japan were engaged. To encourage students to enter the schools, tuition, board, and lodging were given free.

In the city of Mukden the government opened a "depot of maps and books," in which textbooks, classified according to subject, were arranged for inspection and sold at prices lower than those in publishers' lists. Public libraries and museums were instituted. Elementary schools were opened throughout the Province, and a middle school was started in each large city. The opinion that Chinese women did not need an education underwent a transformation, and



Photograph by E. M. Newman.

FIG. 20.—THE DRAGON THRONE UNDER THE TSING DYNASTY.



Photograph by E. M. Newman.

FIG. 21.—ENTRANCE TO UNITED STATES CONSULATE GENERAL, MUKDEN.

the advantages to be gained by their receiving a fair share of education were recognized. The subjects taught in these schools cover a wide field, embracing morals, Chinese literature, history, geography, mathematics, natural science, political economy, natural history, geology, physiology, political science, psychology, criminal law, civil law, constitutional law, international law, etc. Much remains to be achieved in the matter of enforcing discipline and of insuring more thorough instruction. Students are graduated with insufficient qualifications. About 90 per cent of the population of the Mukden consular district is illiterate.

NATIVE SCHOOLS AND HOSPITALS.

In Mukden there are 32 schools of various descriptions (including 6 for girls), with more than 10,000 pupils. According to figures supplied by the commissioner of education, the annual cost to the Government of the schools in Mukden is about $300,000 United States currency. The statistics for 1915 of the various kinds of schools throughout Fengtien Province are as follows: 4,737 primary and intermediate schools for boys, with 187,155 pupils; 33 normal schools for boys, with 1,819 pupils; 14 middle schools for boys, with 976 pupils; 8 agricultural schools for boys, with 290 pupils; 6 industrial schools for boys, with 216 pupils; 10 commercial schools for boys, with 365 pupils; 217 primary and intermediate schools for girls, with 10,341 pupils; 14 normal schools for girls, with 785 pupils; total, 5,039 schools, with 201,947 pupils.

The total expenditure on education in 1915 for the whole Province was $1,214,800, the actual cost to the government having been $928,885. It should be stated, however, that since the revolution of 1911 educational work in this Province has suffered greatly through lack of funds to pay the salaries of instructors and for the maintenance of school buildings and equipment.

There is a large Chinese hospital in Mukden under the direction of a foreign-trained doctor, where much useful work is being performed.

MISSIONARY SCHOOLS AND HOSPITALS.

The activity of missionary societies in the educational field is a potent and efficient factor in the progressive movement. In no Province of China have these societies made more rapid progress than in Fengtien. The people, bred in habits of self-support, have now come to take a large share in the work of maintenance and expansion. At each of the missionary centers—some 30 in number—there exists, besides primary schools, a high school where pupils are educated up to the standard required for the entrance examination of the art college, called the Manchurian Christian College, opened in Mukden in 1902 under the auspices of the Scotch and Irish missionaries. A girls' normal college was established in Mukden in 1911, where the education of the Manchurian girl reaches a high point. The Presbyterian Church in Manchuria maintains 14 boys' middle schools and 125 boys' primary schools, with 8 girls' middle schools and 73 girls' primary schools. The French Catholic mission in Manchuria maintains a seminary in Mukden for training young Chinese priests, and also an orphanage where abandoned children are fed, clothed, and educated.

In 1883 the United Free Church of Scotland sent out the pioneer medical missionary. In 1887 a dispensary and a hospital were erected. These buildings were burned in 1900. A well-equipped hospital, with 140 beds, was erected on the old site and opened in 1907. Returns show that there are now 45,285 out-patients and 717 in-patients, and that 1,214 operations are performed annually. In 1908 a scheme was initiated for the training of dispensers at Mukden. Medical mission work is now being carried on in eight other places. The mission completed in 1911 a large building of four stories for a medical college, which adjoins the hospital. The staff consists of 9 professors and 3 lecturers. The college accommodates 106 resident students. In 1896 the first medical missionary woman arrived in Mukden. There is now a large hospital with accommodations for 90 patients, and returns show that there are 47,219 out-patients and 587 in-patients, and that 881 operations are performed annually. The mission has now well-equipped women's hospitals in charge of women doctors in 11 other important towns.

JAPANESE SCHOOLS AND HOSPITALS.

Education in the Japanese railway area at Mukden has progressed steadily since 1908, when a primary school was opened. A supplementary school was established in 1910. There are now about 500 children receiving their education in these schools. The South Manchuria Railway Co. maintains a medical college at Mukden, opened in June, 1911, with the Chinese military governor as honorary president and a few prominent Chinese officials as consulting members. The faculty includes specialists of acknowledged ability and experience in medical science and other branches of study related thereto, such as physics, chemistry, mathematics, natural history, etc. The faculty comprises 21 professors, 3 assistants, and 8 lecturers. The course is divided into the preparatory and the regular. The preparatory course, limited to 100 students, extends over two years. The regular course, limited to 200 students, is subdivided into medicine and pharmacology, requiring four years and three years, respectively. The post-graduate course, limited to 20 students, occupies more than a year. The preparatory course is designed to teach Chinese students the Japanese language and to impart general knowledge. In the case of Japanese students, those who have finished at a middle school may be admitted to the regular course. The college has an enrollment of 95 Japanese students and 162 Chinese students. The cost to a student for a course in this college is $5 gold per month for the preparatory course and $8.50 gold per month for the regular course. The college stands on a plane equal to the medical colleges in Japan under Government management. It is organized according to the Imperial College act of Japan. Its graduates are entitled to every privilege and qualification accorded the graduates of the colleges in Japan.

A large, well-equipped, and up-to-date hospital is maintained at Mukden by the South Manchuria Railway Co. It was formerly a Japanese military hospital and was taken over in 1907. A new office building and sick rooms with 250 beds were built in 1909. The total number of patients treated annually increased from 9,781 in 1907 to 134,171 in 1915. There are 28 Japanese doctors and 82 nurses, in addition to 87 other employees. Besides the railway hospital, the Japanese maintain in the western suburb of Mukden a branch hospital of the Red Cross Society of Japan. At this hospital skilled attention is given to all applicants at a particularly low charge. At all the other large towns of this district along the South Manchuria Railway hospitals are maintained by that company as well as by the mission societies.

Modern school supplies are used only to a limited extent, while modern hospital equipment is largely employed. In time the use of foreign school and hospital supplies should be extensive. This applies especially to the hospitals.

AGRICULTURE.

The total area of arable land in South Manchuria is estimated at 7,100,000 acres. Around Mukden land is divided into small fields, in which farming is carried on in the intensive manner practiced in China proper. In Fengtien, kaoliang (*Sorghum vulgare*) and millet are the staple foods, meadow land and pasture crops are nonexistent, and live stock are reared only as beasts of burden. The soya bean is the most important of the crops. The foreign demand for this product and the rise of prices during recent years are phenomenal in trade annals. It has brought much wealth to the country and supplies the means of purchasing foreign goods. Kaoliang and millet are grown for home consumption; the former supplies food for man and beast and is used for fuel and thatching. Samshu, a Chinese alcoholic beverage, is also distilled from kaoliang. Products of minor importance are wild silk, barley, upland rice, tobacco, hides, pelts, and maize, of which a poor quality is especially cultivated.

The number of people engaged in agriculture in Fengtien Province is estimated at 2,520,145, and the total area under cultivation at about 4,500,000 acres, apportioned as follows: Kaoliang, 2,166,666; beans, 1,300,000; millet, 433,333; the remaining acreage being devoted to wheat, barley, maize, tobacco, garden truck, etc. The annual yields, in bushels, of the three principal crops are about as follows: Kaoliang, 76,526,643; beans, 40,716,000; and millet, 9,099,993. The annual yield of wheat for all Manchuria is estimated at 60,000,000 bushels. The annual yield of barley in this district is about 128,369 tons. The production per acre, in bushels, of the chief crops of this district is as follows: Kaoliang, 35.3; beans, 31.6; wheat, 23.3; maize, 23.3; barley, 28; and millet, 20.3.

The planting and harvesting seasons are the same as in the northern United States. The method of tillage is very crude. The only tillage tools commonly used are the crude shovel-shaped plow, a land roller, and a hand hoe. In spring the farmer shovels up, with his primitive plow, 5 or 6 inches of earth into a ridge; on this he drops the seed and then rolls the ridge. The thrashing process consists in spreading out the crop on a clay floor and beating out the grain with flails, tramping oxen, and stone rollers. The abundance of the crop is due to the remarkable fertility of the soil, and is in spite of the methods of the farmer. The present methods of agriculture can never fully realize and, in fact, actually diminish the value of the soil. They deprive the soil of humus, and are nondiversified, or, in other words, there is no crop rotation. This condition is aggravated by the continual raking away of the stubble for fuel, thus depriving the soil of organic matter, while the scarcity of animals makes the price of manure prohibitive. Horses, mules, donkeys, and oxen comprise the draft animals of the Manchurian farmer. Manchurian horses are small but can stand prolonged work.

The live stock consists of horses, mules, donkeys, cattle, sheep, pigs, and goats. The estimated number of live stock in Fengtien Province is as follows: Horses, 124,008; cattle, 62,060; mules, 124,242; sheep, 600,000; and pigs, 1,925,260. The estimated number of horses, cattle, and sheep for all Manchuria is as follows: Horses, 2,200,000; cattle, 1,837,000; and sheep, 2,620,000.

Soya beans furnish material for bean oil, bean curd, and bean sprouts, besides serving as a food when boiled. Bean oil is used locally for cooking and as an illuminant; the bean oil for export is employed in soap and olive-oil manufacture, while in the mixing of paints it serves as a substitute for cotton and linseed oils. Bean cake is used as fertilizer and as food for cattle. About 70 per cent of the output of beans is annually exported, the rest being consumed locally. The annual production of bean cake and bean oil in the Mukden consular district is estimated at 433,992 and 54,279 tons, respectively.

It is estimated that one-eighth of the beans exported are shipped to Hongkong, the Straits Settlements, and Europe, three-eighths to South China ports, and the remaining four-eighths to Japan. Of bean oil, Europe, China ports, and Japan are buyers in about equal proportions. A somewhat smaller quantity goes to the United States. Bean cake exported from Manchuria is marketed almost exclusively in Japan, Taiwan, and South China.

During the last decade the provincial government expended a considerable amount of money in establishing institutions to foster agriculture and forestry in South Manchuria. Agricultural experiment stations, agricultural schools, forest-tree nurseries, and experiment farms were organized. Owing to various causes, these are now either closed or suspended. A large experiment station and agricultural school was established at Mukden; it possesses about 250 acres, was well equipped with buildings for farm work, and has classrooms and dormitories for 60 students. It was also well stocked with foreign cattle, sheep, and swine. It suffered much from being on unsuitable soil and from having no unified plan of management. On the teaching staff are three Japanese. The Mukden Forestry Department has about 700 acres and a number of young trees growing there. There is a government live-stock farm at Chenan, near Jaoyangho, on the Peking-Mukden Railway, possessing 15,000 acres, which was well stocked with foreign horses, cattle, and sheep. There is a fruit nursery at Kwangning, where American apples, pears, peaches, cherries, plums, grapes, raspberries, and blackberries were successfully grown.

MINERALS AND MINING.

The latent mineral resources of Fengtien Province are believed to be considerable. No serious attempt, however, has yet been made to develop them. Gold, silver, copper, coal, lead, iron, asbestos, and soapstone are mined in the Province. These mines are worked by Chinese companies, each with a capital seldom exceeding $6,000. Modern machinery is not employed and the methods are very primitive. According to a detailed list supplied by the local bureau of mines, gold is placer-mined in eight districts; silver and copper are produced in one and four districts, respectively. Coal is mined at 36 places, but in a rather crude way, some of the mines being merely outcrop and others rough headings driven into the hillsides. Lead mines are worked in six, and iron in three, localities. Asbestos is believed to be widely distributed, though the list mentions the Siuyen district as the only place where it is actually being obtained. Soapstone exists in large quantities near Haicheng, an old town just north of the boundary of the Kwantung Leased Territory. Within the past two years small quantities have been mined for export. There are 122 unopened mines, consisting chiefly of coal, copper, silver, and asbestos. Exploitation of the mineral wealth of this district by modern methods has been confined almost wholly to coal mining under Japanese supervision. Of the coal mines, the one at Fushun is by far the most important and is owned and operated by the South Manchuria Railway Co. With the Fushun mine are connected ammonia and coking plants. The output of coal from the Fushun pits for the year 1915 amounted to 2,056,194 tons. The daily output of ammonia and of coke is about 11 tons for each product. Next in importance after the Fushun mine are the coal and iron mines at Penchihu, a Sino-Japanese enterprise. The output of Penchihu coal for the year 1915 was 275,113 tons, while the daily production of pig iron is reported to be 150 tons. The output for 1915 of coal from the Yentai mine, owned and operated by the South Manchuria Railway Co., was 74,308 tons.

Mining affairs in Fengtien Province are under the administration of the mining bureau at Mukden. For the permits granted natives a fee of about $30 gold is charged. There is an additional charge of about $0.36 gold per mile to cover the traveling expenses of the deputy dispatched from Mukden to inspect and to ascertain whether there are objections on the part of the people of the locality to the granting of permission to commence operations. Mining grants to foreigners must be sanctioned by the central Government. As a rule both the mining bureau at Mukden and the central Government at Peking are disinclined to grant concessions to foreigners, except as security for foreign loans, and they generally discourage mining schemes where foreigners are concerned. By the Sino-Japanese treaty of May 25, 1915, Japanese have secured the additional right to work mines in nine specified districts in South Manchuria—one iron and five coal mines in Fengtien Province, and one gold, one coal, and one iron-and-coal mine in the southern portion of Kirin Province. Prospecting is now in progress. It is believed that American capital seeking investment in mining enterprises in South Manchuria would find its prospects of success enhanced by cooperation with the Japanese.

The South Manchuria Railway Co. does a large export business in Fushun and Yentai coals; while the whole output of the iron mine at Penchihu is sent to Japan.

The mines at Fushun, Yentai, and Penchihu are being operated by modern methods and with foreign-made machinery, the bulk of which came from Germany and America. The primitive methods employed in the mines worked by the natives are to be attributed chiefly to lack of capital.

COMMUNICATIONS: INTRODUCTION.

All the trade centers of the Mukden consular district possess direct transportation facilities by rail or water with the important ports of China and Japan, and through the Trans-Siberian route with Europe. Mukden is admirably located to serve as a distributing center. It is connected by rail with Dairen, Antung, Newchwang, and Peking, and has also direct outlets at Chinwangtao and Tientsin. Outlets are also found through Vladivostok and Irkutsk. About half-way between Mukden and Harbin is the town of Changchun, an important distributing center for trade to and from Kirin, Heilungkiang, and Eastern Mongolia.

WATERWAYS.

The only waterway in this district is formed by the Liao River and its tributaries. The river rises northeast of Dolon-nor in Mongolia in the Great Khingan Mountains, where it is known as the West Liao. It flows at first from west to east, forming the boundary between Chihli and Mongolia. Entering Manchuria it turns to the south and finally empties into the Gulf of Liaotung. The river is navigable for junks in the flood season throughout its whole course in Manchuria, so that much of the produce of the country west of the river and of Eastern Inner Mongolia is transported over its waters. In its lower part, the channel is fairly deep and can be used by coastwise steamers as far as Newchwang. The whole river, however, is frozen over during the five winter months. Mukden, Tiehling, Liaoyang, Hsinmintun, Fakumen, and Tungkiangtze are situated in proximity to the river and its branches. The junk rates are different for the up and down journeys and also vary with the volume of water in the river. When cheapest, in summer, the rate is about one-third of the railway charge (by train, the tariff per ton between Tiehling and Newchwang is $2.25, while by junk 1 ton between the same points costs $0.75 gold). At low water the rate rises to about two-thirds of the railway fare. The up-voyage takes a much longer time than the railway journey and costs almost as much. While the competition of the railways, added to the neglect of the Liao River and the absence of conservancy works, has resulted in recent years in greatly reducing the junk traffic, yet because of long usage, established business connections, and large vested interests, a considerable trade continues to be conducted over the water route. While in 1904 there were said to be 8,000 bean boats on the river carrying 100,000 tons, there are probably not 2,000 to-day, and within two years the last of these will have gone, if the river has not been improved before then.

All native goods transported by the Liao River route are forwarded under a government permit, for which a fee of 3 per cent ad valorem is charged by the native tax office. Upon arrival at destination a consumption tax of 2 per cent is levied. Wine and tobacco pay a tax of 10 per cent ad valorem at the place of shipment, the payment of which entitles the shipper to a permit exempting the goods from further taxation while in transit. Should the goods be reexported at the point of destination, a further tax of 10 per cent is levied.

RAILWAYS.

South Manchuria possesses greater facilities of railway communication than any part of China proper. In Fengtien Province there are two main railway lines, with several branch lines. The two lines are the South Manchuria Railway (Dairen-Changchun main line and Antung-Mukden branch line) and the Peking-Mukden Railway. These lines branch out from Mukden, running in a southerly direction to Newchwang, Dairen, Antung, and Tientsin and Peking, and in a northerly direction to Changchun. Thus there is easy communication with Japan, China proper, and North Manchuria. The line from Changchun to Port Arthur and Dairen, 439 miles, was formerly a part of the Chinese Eastern Railway (Russian), and was transferred to Japan by the Portsmouth Treaty in 1905. The Japanese main line has the following branches: Port Arthur, 29 miles; Newchwang, 13 miles; Yentai, 10 miles; and Fushun, 31 miles. The Antung-Mukden line, 165 miles, was built by Japan and completed in 1911. The Shanhaikwan-Mukden section, 261 miles, of the Peking-Mukden railway was constructed by China and is under Chinese control and operation. The section to Hsinmintun was completed in 1903 and the extension to Mukden, 36 miles, was built by Japan during the Russo-Japanese war and handed over to China in 1907. A branch line runs from Kowpangtze to Newchwang, 67 miles. The Kirin-Changchun line, 87 miles, was constructed by China and completed in 1913. A recent treaty between China and Japan provides for its eventual transfer to Japanese hands. Nearly all the rolling stock and much of the construction material on the Japanese lines are of American manufacture, while practically all the supplies on the Chinese lines are of British origin.

The South Manchuria Railway since May 1, 1914, has granted a reduction of freight of 30 per cent on 11 kinds of *through* cargo, including cotton piece goods and yarn, carried over its lines from the terminal points, Dairen, Antung, and Newchwang. A reduction of 15 per cent in freight is granted specific *local* cargo shipped over this railway to inland places in Manchuria from the three ports. Freight is not always proportionate to distance. By a series of reductions reciprocal to distance and by specified rates, merchandise carried to and from the three ports costs about the same, so far as the more northern stations are concerned.

On the Peking-Mukden line freights are high, and little effort apparently is made to develop trade. The head office of the South Manchuria Railway Co. is situated at Dairen, where the president, vice president, and directors reside. Among the departments are those of workshops, construction and maintenance, hospitals, land, mining, hotels, geology, stores, harbor works, electricity and gas works, central laboratory, auditing and statistics, etc. The manager and chief engineer of the Fushun colliery resides at the latter place. A superintendent is at the head of each department. American firms, desirous of doing business with the railway, may communicate with any of these officials in English. The position of superintendent of stores corresponds with that of the purchasing agent of an American house. The company's cable address is "Mantetsu," Dairen, and the codes used are A. B. C. 5th edition, A 1, and Lieber's.

The head office of the Peking-Mukden Railway is located at Tientsin.

There are no railways under construction in this district. Those under agreement for future construction are as follows:

Kirin to Hoiryang, on the Chosen frontier, 240 miles, under Sino-Japanese agreement of September 4, 1909.

Three railways radiating from Taonanfu, under Sino-Japanese agreement of 1913, as follows: (1) To Changchun, 180 miles; (2) to Jehol via Chihfeng, 470 miles; and (3) to Ssupingkai, 165 miles.

Kaiyuan to Hailungcheng, 120 miles.

Hailungcheng to Kirin, 110 miles.

Kungchuling to Itungchow, 50 miles.

The detailed loan agreement for the construction of the Ssupingkai-Chengchiatun section, 65 miles, of the Ssupingkai-Taonanfu Railway was negotiated between the Board of Communications and the Yokohama Specie Bank at Peking. The construction is in the hands of the South Manchuria Railway, of which system the new line is to be a part, and work began in the spring of 1917. The total cost of the first section is estimated at $1,500,000. The only work on this section attended with engineering difficulty is the construction of the bridge over the Liao River.

The Chinese Government contemplates the construction of two other railways, as follows:

(1) Chinchow to Dolon-nor. This line, 520 miles in length, would extend from Chinchow, a town situated in the southern part of Fengtien Province, along the Peking-Mukden Railway, to Dolon-nor via Ichow, Chaoyang, and Chihfeng, all of which towns have recently been opened to international residence and trade. A British firm of engineering contractors applied for this concession.

(2) Kalgan to Dolon-nor. This line, 250 miles in length, would be an extension northward of the present Peking-Kalgan line. These lines indicate a direct approach to Peking from the north.

A concession to construct a light rail line between Penchihu and Chienchang, a mining village situated on the upper Taitzu River, 52 miles due east of Penchihu, was secured by the South Manchuria Railway Co. and the Penchihu Colliery & Mining Co. in 1914, on the condition that the line be operated under joint Sino-Japanese management; 70 per cent of the capital was to be furnished by the Penchihu Co. and the remainder by independent Chinese. The first section, Penchihu to Niushintai, a distance of 9 miles, was completed and put into operation by the South Manchuria Railway early in 1915. Plans for the extension of the line to Hsiaoshih, 7 miles beyond Niushintai, are under consideration. It is planned to extend the railway gradually as the collieries along the proposed route are developed and eventually to replace the narrow gauge by the standard gauge. This line, which is purely a mining railway, taps a rich coal and iron district.

The survey of the proposed Newchwang-Kaiping Railway was completed in 1915, and construction work was begun during 1916. Kaiping is on the main line of the South Manchuria Railway, and this new line, 35 miles in length, will reduce considerably the distance between Newchwang and Dairen.

In any consideration of prospective railway enterprises in this region, it is to be noted that in an exchange of notes between the

Japanese and Chinese Governments, dated May 25, 1915, China engages, in the event of being unable itself to supply the funds for building railways in South Manchuria and Eastern Inner Mongolia, to negotiate for a loan with Japanese capitalists.

TRAMWAYS.

A horse tramway, double-tracked, runs from the walled city of Mukden to the station of the South Manchuria Railway, a distance of 3 miles. It is owned and operated by the Mukden Tramway Co., which is a joint Sino-Japanese enterprise with a capital of $95,000 subscribed by Chinese and Japanese in the proportion of 6 to 4, respectively. The charter was granted by the provincial government in 1907 for a period of 15 years, after which the line is to revert to the Government on payment of its assessed valuation to the shareholders. The rolling stock and rails, which consist of property discarded by the municipality of Tokyo after the electrification of its street railways, represent the Japanese shares in the company. The yearly profit of the company is $15,000; in 1915 it paid a dividend of 12 per cent.

ROADS.

In South Manchuria there are no roads in the modern sense of the term except the short streets in the neighborhood of the important railway stations. There are good roads within the city walls of Mukden in the Japanese concession and the area set apart for foreign trade and residence. There are no real roads—that is, metaled or drained—beyond the confines of the jurisdiction of the city. What are styled roads are merely cart tracks over the uneven and friable ground. There are four principal roads out of Mukden:

(1) The *north* road runs through Tiehling, Kaiyuan, Itungchow, and Kirin. Though the traffic between Mukden and Tiehling is slight, that along the road from Tiehling to Kirin is of great importance. During the carting season (October to February) it is computed that at least 3,500 carts pass along this road every day. An examination of the goods carried is interesting and instructive. The carts coming south are loaded to their full extent with grain and beans, alternating with other produce, such as skins, fuel, etc. Those on the return journey carry case oil, piece goods, matches, household requirements, etc., though by no means loaded to the same extent as the incoming carts, about half of them returning almost empty.

(2) The road to the *west* of Mukden runs to Hsinminfu, which is on the important trade route from Fakumen to Chinchowfu; but here again the traffic between Mukden and Hsinminfu is almost purely local in its character.

(3) The *south* road leads to Liaoyang, and is the least important of the four main roads. The traffic is small and conveys little except produce to supply local needs.

(4) The most important road, so far as trade is concerned, is the *east* road through Fushun to the Tunghwa district. It is an old trade route for which Mukden is the only available natural outlet. It taps the large and rich country lying between the Yalu and the Liao Rivers. The hilly nature of the district precludes produce from finding a way out elsewhere.

The towns within the radius of the railway convey their own produce and that of their immediate hinterland directly to the nearest station. Thus the former immense cart traffic has been greatly reduced, except where the old trade route taps regions untouched by the railway. While Tiehling, Kaiyuan, Changtu, Ssupingkai, Kungchuling, and other towns have benefited greatly, Mukden has suffered. The remainder of the network of roads surrounding Mukden link up the innumerable outlying villages. These village communities for a radius of 15 or 20 miles subsist by contributing to the needs of the city.

POSTAL FACILITIES.

The control of Chinese postal affairs in Manchuria is in the hands of a specially appointed postal commissioner residing at Mukden. Post offices, of which there are 197 with 300 agencies, are established at all the cities and towns. Japanese post offices are maintained at all the towns (some 40 in number) along their railways as well as at the other important trading points in South Manchuria. These offices furnish parcel-post and money-order facilities with the United States. The rates and regulations are the same as those obtaining in Japan with respect to mails to the United States. The Japanese postal facilities offer a favorable opportunity for a mail-order trade between the United States and the Mukden consular district. The time for transmission of letters to Tokyo as well as to Shanghai is 2½ days; to Tientsin and Peking, 1 day; and to Europe by the trans-Siberian express route, 13 days. The time required for transmission of letters to or from New York via the Pacific is 28 days.

TELEGRAPHS.

Mukden is the headquarters of the Chinese Telegraph Administration of Fengtien Province. The total length of lines in the Province is 1,820 miles. The materials used are principally of British manufacture. Japanese telegraphs are maintained in connection with the post offices at all the stations along their railways. Cable connections with the United States are via Shanghai by the Chinese lines and via Japan and Bonin by the Japanese lines. The telegraphic rate between Manchuria and Japan is 5 sen ($0.025 gold) per word. The cable rate for a private telegram from Mukden to New York by Japanese connections is $1.33 gold per word; by Chinese connections the rate is $1.21 gold per word. A government telegram to Washington by Japanese connections costs $0.67 gold.

An extension of telegraphs in Manchuria and from Manchuria into Eastern Inner Mongolia is projected by the Chinese Government.

Telegraphic service is to be established between Mukden, points in Eastern Inner Mongolia, and Jehol. The line will extend from Mukden to Taonanfu, a distance of 261 miles, thence south to Jehol via Chihfeng, an additional 325 miles, making the total length of the line 586 miles. Jehol is already connected by telegraph with Peking. This arrangement was made in March, 1915, and the estimated cost is $600,000. The commencement of work was postponed owing to the Sino-Japanese negotiations in May, 1915. The Peking Government in 1916 ordered the civil governor at Mukden to start work at once. At the same time a grant of $100,000 was made as the

Government's share of the work on the first part of the plan. The expense is to be borne in equal shares by the central Government and the provincial Government.

TELEPHONES.

There are two telephone services operating in Mukden, one Chinese and the other Japanese. The Chinese service operates 900 telephones by common batteries on about 63 miles of wire. The Japanese service operates about the same number of telephones, though on more miles of wire. Chinese telephone systems are also maintained at Changchun, Kirin, Tiehling, Kaiyuan, and other places. The Japanese maintain telephone systems at all the important cities and towns along the South Manchuria Railway. There are telephones for public use at all the post offices and automatic telephone stands at central points throughout each town, the charge in each case being $0.025 per call. Moreover, the South Manchuria Railway maintains a long-distance telephone service along its main line and branches. Practically all of the telephonic supplies for these installations, Chinese and Japanese, were obtained from the Nippon Electric Co., of Tokyo, Japan. The monthly subscription to a telephone in the Chinese system at Mukden is $3 gold; in the Japanese system, $3.50.

NEWSPAPERS.

The leading Chinese newspapers of this district are as follows:

Public Opinion of Manchuria, Mukden; the leading Chinese daily, owned by Chinese and edited in Chinese. Circulation: 7,000 daily. This paper receives a government grant of $75 gold a month. The annual subscription price is about $3 gold. The advertising rates are: Full page, $3 gold for one day, $50 for one month, $133 for three months; half page, $2 for one day, $25 for one month, $66.67 for three months; quarter page, $1 for one day, $12 for one month, $33.33 for three months; 50 small characters—3 days, 8½ cents gold per day; 15 days, 5 cents per day; 30 days, 4.2 cents per day.

Mukden Daily Times; the leading Japanese daily, owned and controlled by Japanese and edited in Chinese. Circulation: 5,000 daily. The annual subscription price is about $3 gold. The advertising rates are: Full page, $25 gold per day; half page, $12.50 per day; quarter page, $6.25 per day; 16 small characters, 3 days, 13 cents per day. Special arrangements can be made for longer periods.

Kirin-Changchun Daily News, Changchun; the leading daily, owned by Chinese and edited in Chinese. Circulation: 4,000 daily. The annual subscription price is about $3 gold. The advertising rates for full page, half page, and quarter page are about the same as those of the Public Opinion of Manchuria, given above; for 100 small characters the rates are: For the first day, 13 cents gold; from the second to the seventh day, 10 cents; after the seventh day, special arrangements.

Yingkow Commercial Daily News, Newchwang; the leading Chinese daily, owned by Chinese and edited in Chinese. Circulation, 1,000 daily. The annual subscription price is about $3 gold. The advertising rates offered (subject, however, to bargaining) are: Half page, one month, $13.20 gold; eighth of a page, one month, $5.28.

The two Mukden papers consist of eight sheets each, nearly half being covered with advertisements. Besides local news, presidential orders, and important appointments, they publish news of China generally and the principal foreign telegrams. They also deal with exchange, market, and commercial news. The daily leading article treats intelligently of current affairs of interest. The monthly subscription is $0.32 and the price per copy is $0.02 gold. The leading native and foreign newspapers of Peking, Tientsin, and Shanghai circulate throughout this district. The Manchurian Daily News, the official organ of the Kwantung government (Japanese), edited at Dairen in the English language, has a large circulation among foreigners throughout Manchuria.

It is estimated that 10 per cent of the natives of this district are able to read.

PUBLIC WORKS AND SANITATION.

CONSERVANCY AND RECLAMATION WORK.

An agreement was concluded in 1914 between China and the Treaty Powers relating to the Liao River conservancy. The work comprises the dredging of the bar at the mouth of the Liao River and the improvement of the river channel from there to Newchwang harbor. A loan of $600,000 Mex. to cover the cost of the work has been effected with the Hongkong & Shanghai Banking Corporation and the Russo-Asiatic Bank. The revenues for repaying this loan are to be derived from a surtax on imports and exports, native and foreign, and dues on shipping, native and foreign, entering Newchwang through the Maritime Customs. The Chinese Government has agreed to carry on, concurrently with the work on the lower river, measures for improving the upper reaches of the river, and for this purpose the provincial government has set aside $100,000. This amount is to be collected from the trade and shipping coming under the Native Customs. The conservancy board commenced operations during 1915 by taking preliminary steps to prevent an interruption that was threatening the river channel between Newchwang and the sea. Now that funds are available the work should progress more rapidly. The board has decided that the work should be done by its own staff and not by contract.

Some reclamation work has been carried on in recent years by the provincial government in connection with the construction of a port at Hulutao, which is situated on the Liaotung Gulf, opposite Newchwang. A stone wall has been constructed on a shoal, which is exposed at low water, on the inner side of the isthmus connecting the peninsula with the mainland. The area to be reclaimed within the wall amounts to about 10,000 acres and is to afford a town site. A breakwater about 4,900 feet long is to be built at a cost of $1,500,000; about 930 feet has already been constructed. A hotel and a residence for the engineer in charge of the works have been erected. A hundred or so small houses have been constructed for the use of tradespeople and workmen. The telegraphic and telephonic communications have been installed. The port is 7 miles from Lienshan on the Peking-Mukden line, and the two places are connected by rail for the use of construction trains. More than $500,000 has already been expended by the central Government on the works, and the sum of $2,800,000 more is required to complete the project. Owing to lack of funds no work has been done since 1913, and it is impossible to state when operations will be recommenced.

STREETS IN CITIES AND TOWNS.

There is no municipal organization as such in Chinese cities and towns, the district (township or county) being the unit for administrative purposes—civil, political, judicial, and fiscal—within the Province.

As a rule the streets in the native cities and towns of this district receive little attention in the way of upkeep. In Mukden the streets are rather better than those in most Chinese cities. The principal thoroughfares of the native city were reconstructed and remetaled during 1907–8 at the expense of the provincial government, when macadam roads were also constructed in the foreign settlement, but many of these streets and roads have fallen into disrepair and are being neglected on the pretext of lack of funds, though a special tax for the upkeep of the streets is levied on all carts and vehicles using them and, in addition, the tax on land in the foreign settlement is, by regulation, to be applied toward the maintenance of the roads. There is a fairly good carriage road between the Japanese railway station and the walled city of Mukden, 2 miles in length. In the Japanese settlements along the South Manchuria Railway there are good streets.

ELECTRIC LIGHTING.

The principal cities of this district are lighted by electricity. In Mukden the main streets, the public buildings, many shops, and the large residences are lighted by electricity, the use of which has spread rapidly.

WATER SUPPLY AND SEWERAGE.

There is no water supply or sewerage system in Mukden, nor is their establishment in serious contemplation. The provincial treasury is constantly impoverished. Except for a small waterworks and sewerage system maintained by the South Manchuria Railway Co. in its settlement at Mukden, there are no such systems in this district. The Yingkow Waterworks & Electricity Co., a joint Japanese-Chinese concern, maintains a water-supply system at Newchwang. The same company owns the local telephone system, which has a large number of Japanese and Chinese subscribers.

FIRE PROTECTION.

The Chinese Chamber of Commerce at Mukden maintains a fire brigade, equipped with hand pumps, hose carts, and buckets. This brigade is not always effective, especially when a fire originates at some distance from a well or other source of water supply. The municipality of the Japanese settlement maintains a volunteer fire brigade, which is equipped with motor-power and hand-power pumps, hose carts, hook-and-ladder carts, and buckets. At various places in the Japanese settlement are hung bells that sound the alarm when a fire occurs either in the Japanese concession or in the native city. These fire bells are near the Japanese police stations and are sounded by the police when occasion requires. In the new Japanese railway town at Mukden, where a small waterworks system has been installed, there is a good supply of water, but in all other parts of Mukden the supply is generally inadequate.

PUBLIC-SERVICE COMPANIES.

At Mukden and Changchun both the provincial government and the South Manchuria Railway Co. maintain electric light plants. The provincial government of Kirin owns and operates an electric light plant at the capital of that Province. At Liaoyang and Tiehling electric light plants under Sino-Japanese control have been installed. Another Sino-Japanese public-service enterprise is the Yingkow Waterworks & Electricity Co. at Newchwang. The South Manchuria Railway Co. has installed an extensive electric light works at Fushun. The machinery and supplies used in the installations at Mukden and Changchun are mostly of American manufacture, while the one at Kirin has principally German materials. Japan supplies most of the machinery and fittings for the other plants named. The plant at Mukden was established by a grant of the provincial government in 1908, at an original cost of $250,000. It is under the direction of an American engineer acting under a resident Chinese director, and is well managed. Besides being used for lighting, the electricity of this plant serves as the motive power for fans, for motors in several printing establishments, a cigarette factory, and a native flour mill. Several motors are used for irrigation purposes. The capacity of the plants in this district is as follows:

Mukden Electric Light Works.—Alternating current of 50 cycles and with a primary voltage of 2,250 and a secondary of 110.

South Manchuria Railway Electric Light Works.—Alternating current of 40 cycles and with a primary voltage of 3,000 and a secondary of 110.

Tiehling Electric Light Works.—Alternating current of 50 cycles and with a primary voltage of 3,000 and a secondary of 110.

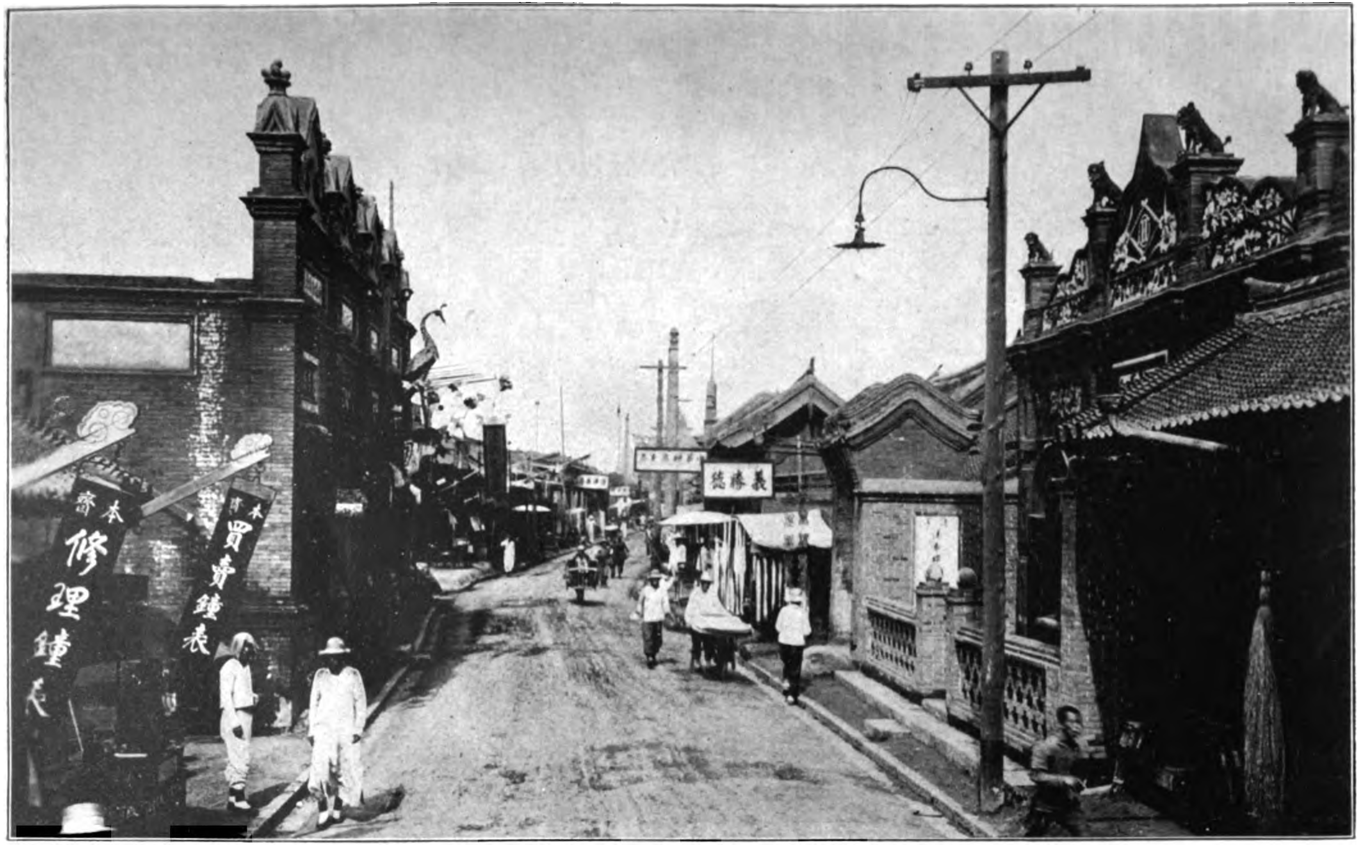
Liaoyang Electric Works.—Same equipment and capacity as the Tiehling works.

Changchun Electric Light Works.—Alternating current of 60 cycles and with a primary voltage of 2,250 and a secondary of 110.

Kirin Electric Light Works.—Alternating current of 50 cycles and with a primary voltage of 5,000 and a secondary of 220.

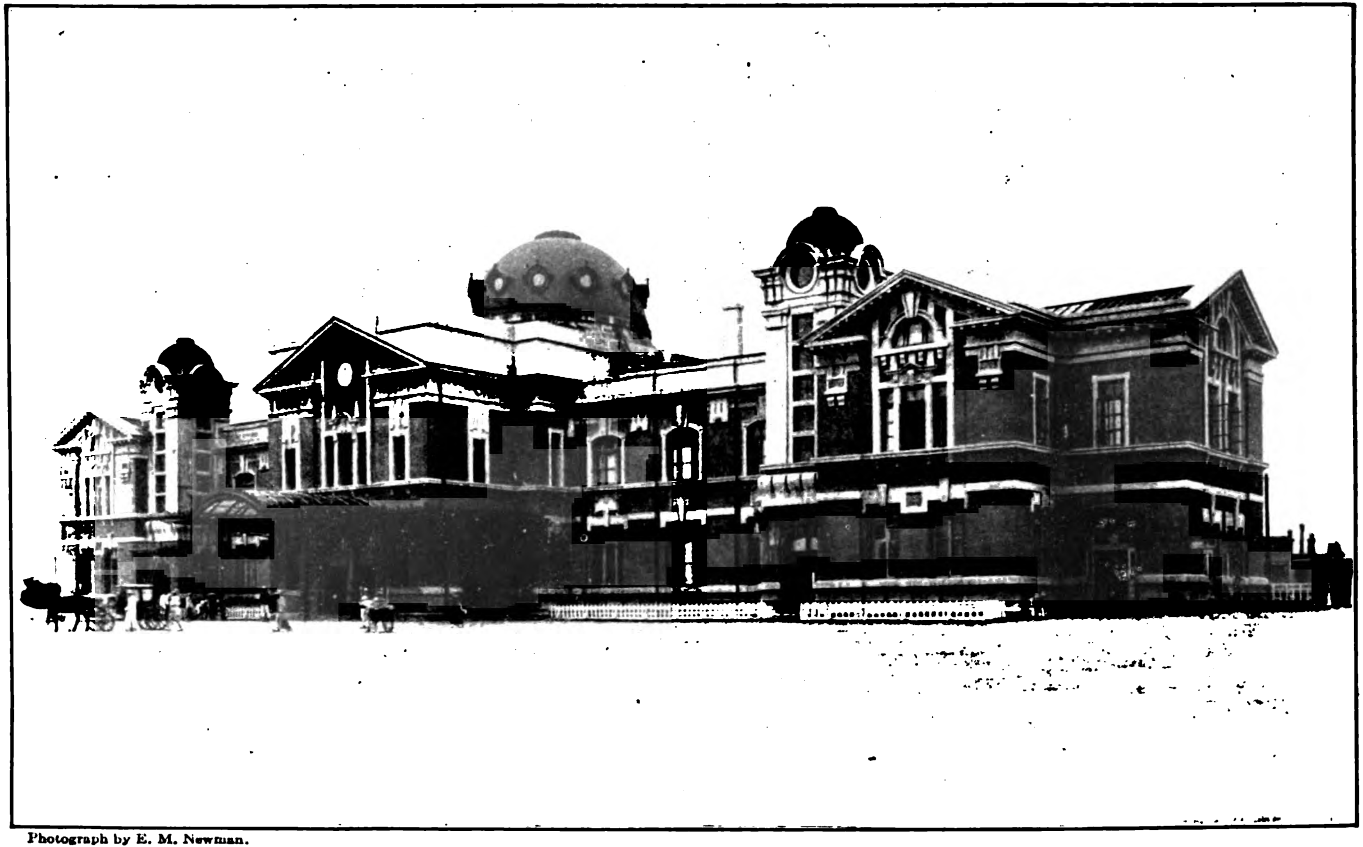
The scale of charges at the Chinese plant in Mukden is as follows: Per kilowatt, $0.08; meter rent per month, $0.33; charges for lights without meter by special arrangement, according to power consumed and number of lights.

The only waterworks systems in this district are the small plant in the railway settlement at Mukden and the service at Newchwang. In 1914 a Chinese company petitioned the provincial government for permission to install waterworks at Mukden. The proposed capital was to have been $1,000,000 local currency (about $400,000 United States currency), in 100,000 shares of $10 each. The amount to be paid up before commencing work was to be $240,000, the remainder to be called for as required. As the promoters did not file particulars and, moreover, lacked the funds necessary to carry out the project, the petition was refused. The company, however, was granted additional time within which to comply with the regulations, but so far nothing has been done in the matter. A waterworks system, if properly installed and maintained and conducted in a business-like manner, should prove a profitable enterprise in Mukden.



Photograph by E. M. Newman.

FIG. 22.—STREET SCENE IN MUKDEN.



Photograph by E. M. Newman.

FIG. 23.—RAILWAY STATION, MUKDEN.

TREATY PORTS AND FOREIGN CONCESSIONS.

The Mukden consular district includes the following places opened to international residence and trade: In Fengtien Province—Mukden, Newchwang, Liaoyang, Hsinminfu, Tiehling, Tungkiangtze, Fakumen, and Chinchow; also, in the Chientao region in eastern Fengtien, Lungchingtsun, Chutszchie, Towtaokow, and Paitsaokow. In Kirin Province—Changchun, Kirin, and Hunchun. There are international settlements at Mukden and at Newchwang; at Mukden a special area adjoining the walled city has been marked out and set apart for foreign residence and trade, but the boundaries of the so-called international settlement have never been defined, while the experimental draft regulations governing the lease of land therein have not yet obtained the approval of the consular body or the sanction of the diplomatic corps at Peking. Land, however, is being leased in perpetuity by foreigners both in the so-called settlement and within the city itself, and leaseholders are paying provisionally the recognized ordinary taxes; all leases of land in the settlement are being made through the land office at fixed prices.

The South Manchuria Railway Co. has established settlements on the railway lands at all the large stations; moreover, the Japanese have formed exclusive settlements, apart from the railway settlements, at Mukden and Newchwang. Foreigners may reside and transact business within the Japanese settlements; they may also lease land therein with the sanction of the Japanese consul for a period of 20 years, with the privilege of conditional renewal, but they must first declare before their respective consuls that they will abide by the Japanese regulations devised for the settlements. All residents of these settlements, including foreigners, are assessed a household tax, based on the amount of income, and a business tax. Foreigners, however, have so far resisted the payment of these taxes and the question is now under negotiation. The Japanese residents in each settlement constitute a municipality under the control of the Japanese consul. The functions of the municipality are confined to matters relating to education, sanitation, lighting, etc. The taxes are collected by the municipality office, while as an advisory organ there exists an administrative committee. The right to representation on the settlement councils is theoretically extended to foreigners. The South Manchuria Railway Co. has charge of civil affairs in the leased territory of the railway, which embraces the numerous railway settlements. Under the Sino-Japanese treaty of May 25, 1915, Japanese subjects have special privileges as regards travel, trade, industry, residence, and landholding in the interior of South Manchuria. The Japanese population at Mukden is 9,000, and other foreigners, including 25 Americans, number 150. The Chinese population is estimated at 175,000. In Newchwang there are 2,400 Japanese, while the other foreigners, including 5 Americans, number 190. The Chinese population of Newchwang is estimated at 54,000. There are 5,000 Japanese and 176 other foreigners, including 3 Americans, at Changchun; the Chinese population is placed at 100,000. The foreign population of Kirin is small, consisting of Japanese and a few Russians. The Chinese population is given as 125,000.

Japan has consular establishments at all the places above named, the consulate general for the whole of Manchuria being located at

Mukden. Japanese consular officers in Manchuria are, as well, secretaries to the governor general of the Kwantung Territory, to whom the president of the South Manchuria Railway Co. is also an adviser. These consular officers have charge of police affairs along the railway lines under the instruction of their superiors at Port Arthur. Police officials of the government general of Kwantung may, in addition to their regular positions, be appointed as police officials attached to the consulates in South Manchuria. There is a Russian consulate general at Mukden and consulates at Newchwang, Changchun, and Kirin. Great Britain maintains a consulate general at Mukden and a consulate at Newchwang. Germany maintains (ordinarily) a consulate at Mukden for all Manchuria, with a vice consulate at Newchwang. There is a French consul at Mukden for all Manchuria. At Newchwang a merchant serves as consul for the Netherlands and vice consul for Norway; another merchant is vice consul for Sweden.

In the treaty marts, as well as in the railway zone, conditions are not unfavorable to foreign trade. Many of the Japanese goods imported into Manchuria and intended for distribution in the interior do not involve the taking out of a transit pass, as they are marketed in the various Japanese settlements along the railway by Japanese shopkeepers who are not liable to Chinese taxes. Japanese products marketed in these Provinces are imported almost entirely by Japanese subjects, and a considerable portion is distributed by Japanese merchants. On the other hand, American goods, aside from kerosene, tobacco, and sewing machines, are chiefly imported from Shanghai through Chinese and distributed by Chinese who pay the internal taxes. American goods would receive the same treatment on the Japanese railways and in the settlements as the goods of Japan or any other nation.

Foreign shippers seem now to have become fairly satisfied with their treatment by the South Manchuria Railway Co. It is admitted that they are being given good and prompt service even during the busiest season, and the belief is growing that the Japanese are endeavoring to treat the foreign shippers as fairly as their own people, though the smaller Chinese shippers are at a disadvantage.

FINANCE AND BANKING.

Finance and currency in this district are in a chaotic condition. Great quantities of notes for both "large" and "small" dollars have been issued under government guaranty. The general currency is "small coin," the 10-cent piece being the unit. Small-coin notes are issued by the banks at values varying from 1 10-cents to 500 10-cents. The value of small coin in reference to large dollars and the gold and silver yen varies daily. There are in Mukden two or three kinds of taels, at least three different kinds of dollars, small coin in silver of every coinage in the country and small coin in notes, copper cents, tiao notes issued by private Chinese hongs and banks, copper cash, Japanese gold yen in coin and in notes and the subsidiary currency, Japanese silver yen, and Russian rubles. Monetary conditions in South Manchuria in recent years have been influenced by Japan. The Chinese posts, telegraphs, and railway demand payment in Peiyang or large dollars. The Japanese railway and posts and telegraphs require gold yen, while ordinary store purchases, wages, etc., are in small coin.

The Chinese banking system in Mukden has not yet been placed on a sound basis, and exchange business with places abroad is too uncertain to secure a clientele. Foreign exchange in Mukden is now transacted only through the Yokohama Specie Bank. As the local native banks often issue their own notes indiscriminately and without sufficient reserves they become discredited, and, as a result of the great uneasiness felt in commercial circles in handling such notes, runs on these banks are frequent. The note issues consist of tiao, dollar, tael, and subsidiary-coin notes, not negotiable outside of the Province. It is estimated that these notes for seven banks reached in 1915 a total value of $18,000,000 small coin, while the reserves amount to $8,000,000 small coin. To aggravate the situation still further there are large quantities of counterfeit notes and coins in circulation; and along with the scarcity of metallic money occurs the issuance at intervals of debased coin. The unsatisfactory monetary situation, which has been the chief obstacle to the development of foreign trade in this district, is being improved through the increased circulation of the Japanese gold yen. Importers are now able to base their sales of foreign goods upon a gold standard, thus eliminating the speculative element growing out of the rise and fall of silver. The note circulation of the Japanese banks in this district amounts to $4,325,000 United States gold, of which $2,500,000 represents the value of gold notes and $1,825,000 of silver notes.

Unless the Chinese Government is able in the near future to redeem the heavy issues of the native banks for which no reserve is held, and to effect a currency reform in Manchuria that will enable Chinese merchants to obtain loans on good security at reasonable rates, the gold yen will become the chief, and in time the sole, circulating medium. The native banks, at the instance of the Chinese Government, have made sporadic attempts at redemption of their notes, but so little progress was made that confidence in this paper currency has not increased.

The difficulties attending foreign commercial transactions in this district are to be found in the currency conditions above described and in the trade peculiarities of the Chinese merchants. The latter are not accustomed to foreigners; being ignorant of the methods of foreign banking, having no idea as to how to conduct correspondence with foreigners, and being unable to communicate in English, they insist that transactions take place through the medium of some one they know and with whom they can converse. This is the comprador.

The native banks grant credits to Chinese merchants on approved securities at the rate of 15 per cent per annum, while the foreign bank rate is from 7 to 10 per cent.

The following are the foreign banks in the treaty ports of this district: Hongkong & Shanghai Bank, at Newchwang; Russo-Asiatic Bank at Newchwang and Changchun; Yokohama Specie Bank, at Mukden, Newchwang, Changchun, Liaoyang, and Tiehling; Bank of Chosen, at Mukden, Kaiyuan, Ssupingkai, and Changchun; Chenglung Bank, at Mukden, Yingkow, Changchun, and Kaiyuan.

The Hongkong & Shanghai Bank, the Russo-Asiatic Bank, and the Yokohama Specie Bank transact all kinds of banking and exchange business, while the Bank of Chosen and the Chenglung Bank confine themselves to Japanese and native business. The Japanese banks show a preference for merchants and traders of that nationality.

Rates for advance on cargo exported are as follows: Japanese, 7 per cent; foreigners, 8 per cent; Chinese, 10 per cent. Also, special facilities are granted to customers who wish to deal in exchange drawn in Japanese currency. The Japanese banks render all possible facilities to Japanese and Chinese merchants who have Japanese goods consigned to them for account of such merchants, delivery against cash payment. In such cases the banks will permit the merchants to draw out small portions of the goods at a time against equivalent cash payments. The South Manchuria Railway Co. also renders similar facilities to such merchants. The Yokohama Specie Bank loans money to members of the Japanese Cotton Exporters' Association at the reduced rate of 4½ per cent per annum. This is done at the direction of the Japanese Government as a special aid to this trade.

The following are the leading Chinese banks in this district: The Bank of China, the Bank of Communications, the Bank of Territorial Development of China, the Fengtien Provincial Government Bank, the Kirin Provincial Government Bank, the Heilungkiang Provincial Government Bank, the Industrial Bank, and the Commercial Bank. So far as assistance in developing Chinese trade is concerned, the native banks are useless. Their business appears to be restricted to advances on real estate and other approved securities at high rates of interest (1¼ per cent per month) and to dealing in exchange values, in which the numerous currencies and notes of Manchuria afford an extensive and remunerative business.

The Bank of China, the Bank of Communications, and the Bank of Territorial Development of China allow 2 per cent interest per annum on current deposits, 3 per cent per annum on fixed deposits for three months, 4 per cent per annum for 6 months, and 5 per cent per annum for 12 months, while the three Provincial Government Banks of Fengtien, Kirin, and Heilungkiang, the Industrial Bank, and the Commercial Bank allow 3 per cent per annum on current deposits, 4 per cent per annum on fixed deposits for 6 months, and 7 per cent per annum on fixed deposits for 12 months.

All the above native banks charge 1¼ per cent per month on overdrafts.

MANUFACTURING AND OTHER INDUSTRIES.

Manchuria being essentially an agricultural country, there are as yet few modern industries employing skilled labor. Advances in certain lines of industry, however, are occurring, chiefly because of the increased capital available for investment and the improved transportation facilities. Several items of export consist of semimanufactured articles. Small household industries are becoming independent occupations, while better methods and larger undertakings are gradually coming into vogue. The chief industries are bean-oil and bean-cake manufacture, flour milling, the distilling of liquors, the tanning of leather, the manufacture of brick and tiles, weaving and dyeing, and the usual trades.

MODERN INDUSTRIES UNDER NATIVE CONTROL.

Among the leading modern industries and manufactures under native capital and management are the many small factories turning out cotton woven fabrics. There are 138 weaving establishments in Newchwang; 50 are engaged in the manufacture of imitation foreign sheeting, using 1,000 Japanese-made looms, each capable of turning out one piece of 40 yards per day; 8 other factories with 40 looms are making an imitation Shanghai-made cloth, each machine turning out 1½ pieces of 21 yards per day; the remaining 80 factories are weaving cotton tape and waist and ankle bands at an average daily rate of a dozen pieces of assorted lengths for each machine. Japanese cotton yarn is principally used on account of the credit allowed the small manufacturer by the yarn dealers. There are also 20 factories in Newchwang engaged in the manufacture of cotton hose. They operate 100 Japanese-made knitting machines, each capable of turning out 2 dozen pairs a day. A Chinese company at Mukden, capitalized at $1,000,000, is engaged in the manufacture of sheetings. The machinery consists of 30 looms with about 50 operatives, and the daily output is 1,200 yards. The same company operates a cotton mill at Liaoyang containing 24 looms—16 for sheetings and 8 for nankeens. The production of this mill in 1915 was 6,500 pieces of sheeting and 4,500 pieces of nankeens. Two match factories at Newchwang are capable of turning out 2,000 gross of boxes daily. The raw material is imported almost entirely from Japan, and consumption is at present chiefly confined to Fengtien Province. Of the 440 operatives employed, 60 are women.

The bean-milling industry is large. There are 35 bean mills, Chinese owned and managed, in Mukden, 30 in Liaoyang, 13 in Haicheng, and 12 in Newchwang. These native mills contain only hand-power presses taking five cakes at a time. The largest contains 120 presses and can turn out 5,400 cakes a day; the smallest contains 20 presses and can turn out 900 cakes a day. Mills work for eight or nine months a year; that is, they shut down for two months in the middle of winter and for one month in the height of summer. Work is regulated by market conditions, prices, supply of beans, and also demand for the cake and the oil. There is an average daily output at Newchwang of about 20,000 cakes, or of something less than 7,000,000 cakes a year. There are native flour mills with modern machinery at Tiehling and Changchun. The manufacture of samshu, the native spirit distilled from corn and kaoliang, is increasing in Mukden. At the Government Manual Training Institute in Mukden Chinese are taught weaving, carpenter work, dyeing, embroidering, and the manufacture of lacquer ware, hardware, carpets, and leather goods.

CRUDE NATIVE INDUSTRIES.

Skins.—Mukden is celebrated for the excellence of its curing and piecing together of skins. These are mainly raccoon, squirrel, cat, otter, fox, and dog. Though skins of sable, tiger, leopard, and martin are prepared and sold there, the market is slowly moving toward Harbin. The coarse Mukden-cured skins, such as sheep and dog, find a ready market all over Manchuria. The magnitude of the fur trade is accounted for by the extreme rigor of the winter, which renders necessary the universal use of skins in addition to the wadded clothing worn by the inhabitants.

Cart wheels and axles.—The manufacture of cart wheels and axles constitutes one of the most flourishing local trades, these products being exported all over Manchuria. The wood used is hard and durable and is imported almost wholly by rail from Chosen. The work is done entirely by hand, and the number of men employed in this trade, together with the tire and nail trade, is considerable.

Ready-made clothing.—A great number of people are employed in the manufacture of all kinds of clothing. In every branch of this trade the locally made article competes successfully with imported goods, especially in foreign-style hats and caps, which have almost replaced the old Chinese headgear. The output sells readily throughout Manchuria. The clothing of the entire police force, as well as the military, in foreign-style uniforms has given an impetus to the tailoring and allied trades. The total number of sewing machines in use is large. To this activity in the clothing trade may also be attributed much of the good business done by the piece-goods merchants and the strengthening of their position as middlemen for the northern trade. Except among the official class and a few southern Chinese merchants, there is little indication as yet of any tendency on the part of the mass of the people to adopt foreign-style clothing, though foreign-style hats have undoubtedly come to stay.

Kitchen utensils.—There is a flourishing trade in this line. Immense quantities of small fire shovels, iron ladles, and well buckets are made from iron plates and sheets, which formerly came mostly from England but are now coming from America. Foreign scrap iron of all sorts is smelted down and cast into small kettles, while native iron is used for casting large cooking bowls. A considerable trade is done in small copper and brass kettles, cooking pots, spoons, ladles, strainers, and large brass water boilers. Great quantities of small oblong boxes with sliding lids are also sent out over Manchuria from Mukden. A flourishing trade is done in pig's-bristle brushes.

Iron and brass trade.—A brisk business is also done in nearly all branches of the iron and brass smiths' trade. Iron tires, spikes and nails, small stoves cast from an American pattern, thin stove piping, hammers, saws, locks, hinges, masons' tools, as well as such agricultural instruments as spades and rakes, are turned out daily and sell readily. All of the foregoing are entirely of native manufacture and fashion, foreign articles for like uses not being favorably received up to the present time.

FOREIGN INDUSTRIES.

The largest bean mill in Newchwang, and in fact the only one with up-to-date machinery, is operated by the Japanese firm of Kodera & Co. This mill has 40 pressing machines capable of turning out 6,000 cakes a day. Its presses are hydraulic and take 25 cakes at a time. The Japanese have several bean mills at Liaoyang. Japanese flour mills, operated by steam and electricity, are located at Tiehling and at Liaoyang. The Japanese cigarette factory at Newchwang is doing a flourishing business. The Sanlin cigarette factory, at Mukden, under Japanese management, has a capital of $10,000; about 50 Chinese hands are employed, and the annual output has an estimated value of $40,000. The Hoizumi glass factory, at Mukden, under Japanese management, with a capital of $12,500, employs 12 Japanese and 32 Chinese hands; the value of the annual output is given as $17,500. A Japanese match factory, with a capital of

$22,500, is located at Kirin, with a branch at Changchun. Another Japanese match manufacturing company, capitalized at $150,000, has a plant at Changchun. The daily output of these factories is 3,000 gross of boxes.

The Manchuria Daily News reports that the Manchuria-Mongolia Wool Manufacturing Co. has been registered at the Japanese consulate at Mukden with a capital of 10,000,000 yen ($4,985,000). The Japanese Government will include in the budget of the Kwantung government an annual grant to this company of 150,000 yen ($74,775) for four years. The head office will be located at Mukden, where a woolen-yarn and weaving factory will also be situated. At Tientsin a branch office and wool cleaning and combing factory will be established. Manufacturing will probably not begin before the latter part of 1919.

The Electrochemical Industry Co., of Tokyo, has installed a plant at Fushun for the production of carbide, sulphate of ammonia, and other chemical products.

The South Manchuria Sugar Manufacturing Co., controlled by Tokyo financiers and capitalized for 10,000,000 yen, has constructed a large refinery at Mukden. The farmers in the Mukden district are being encouraged to grow sugar beets.

There is a large distributing business in tobacco, which was augmented by the establishment at Mukden in 1909 of the factory of the British Cigarette Co., an allied company of the British-American Tobacco Co. The factory was destroyed by fire in 1914, and though it has since been rebuilt the manufacture of cigarettes has not been resumed. The factory at Newchwang maintained by the tobacco monopoly of Japan continues to turn out large quantities of cigarettes from the Manchurian leaf, the bulk of which comes from Kirin Province, blended with the Korean and American leaf. In addition, vast quantities of ready-made cigarettes are imported by the Japanese company from Japan and by the British company from England, America, and Shanghai. The consumption of cigarettes has advanced by leaps and bounds during the past decade; and the competition between these two companies for the cigarette market of Manchuria has been keen. Both companies claim great advance in their sales, though neither has yet succeeded in overcoming the other. The business in tobacco, raw and manufactured, is one of the staple trades of this district, and is likely to increase.

Manchurian industries are on the eve of a great development. Animals and hand power as the motive forces are slowly giving way to steam and electricity; hence industries are being consolidated into a factory system, and Manchuria, with its abundance of raw material, cheap labor, large coal deposits, and good transportation facilities, should in time become an industrial country. By virtue of the Sino-Japanese treaty of May 25, 1915, respecting South Manchuria and Eastern Inner Mongolia, Japanese are permitted to reside throughout South Manchuria and engage in business and manufacture of every description. They may lease land for a 30-year period with unconditional renewal, for the erection of suitable buildings for trade, manufacture, and agricultural enterprises. The Chinese Government also engages to consent to joint Sino-Japanese operation of agricultural enterprises and industries incidental thereto. There has been a bill in the Japanese Imperial Diet for the establishment of a special bank to finance Japanese enterprises in Manchuria and Mongolia. Such a financing medium, granting special facilities to intending investors in Manchuria, would be warmly welcomed in Japanese commercial circles and should lead to the rapid development of these regions along industrial, residential, transportation, and real estate lines.

EXPORT TRADE.

The export trade of this district occupies an important place and during the past decade it has shown marked increases. The chief article of export is the soya bean and its products, followed in a much smaller volume by cereals, hides, skins, furs, and bristles. Coal has also been largely exported in recent years. Conditions favoring the export trade are the great natural resources, including the fertility of the soil and the abundance of minerals; the good climate; and exceptional highways of communication, including waterways, land routes, and a network of railways, which possess good terminal facilities at the seaboard.

The region is sparsely settled, and agriculture is in a primitive stage. The people in general are engaged in agriculture and stock farming. Forestry and mining are confined to a few places, while manufactures are crude and hold a very subordinate place. Among other conditions handicapping the export trade are: (1) The unsatisfactory currency conditions; (2) the inadequate transportation facilities throughout the interior; (3) the activities of robber bands; (4) the complex political situation, which tends to prevent merchants in the interior from acquiring stocks; and (5) the rainy season, which continues for three months yearly, when the roads become practically impassable. Where loads can be carried at all they are only small ones.

As regards main conditions in the handling of the export business, the usual procedure is to purchase in the open market and to make payments as soon as shipping documents are obtained. The long interval between purchase and shipment, due to the distance of the shipping port from the interior points, is financed by the comprador; but if the goods are shipped over the South Manchuria Railway through bills of lading may be obtained at the railway freight offices, upon which documents the shippers may obtain advances. The shipping costs on general cargo c. i. f. San Francisco, including export duty, are between 12 and 15 per cent during normal times. Customs duty is levied in China on exports as well as on imports, both being assessed at rates based on a nominal 5 per cent levy. While the opening of the Panama Canal was expected to reduce these charges so far as they relate to shipping, lack of tonnage and high freight rates have combined to counteract this advantage.

The established foreign firms in the open marts of this district make their most extensive purchases through the comprador, who employs reliable native agents in the various producing centers and through them makes judicious advances to the producers, thus securing contracts for forward delivery at prices appreciably below average market rates. This system is favored by many producers, as it insures a firm and reasonable price for their goods instead of prices arbitrarily fixed by the local chambers of commerce. The large Japanese firms have adopted the same system, except that the services of the comprador are dispensed with.

The regular market rates, which are periodically fixed by the chambers of commerce, are influenced by the amount of stock held in the warehouses, the proprietors of which are invariably members of the chamber of commerce and the various trading guilds. As soon as a buyer or seller comes into the market and makes an inquiry or an unsuccessful attempt to negotiate business, full particulars thereof are sent immediately to all the other warehouses, so that it is practically impossible for a prospective buyer or seller to do business independent of the guild.

Cash buying is of value not only for the immediate benefits derived from purchase, but for the impression it makes upon the natives, who are likely to sell more cheaply for cash to the foreigner with his supposedly abundant capital rather than to accept the risks of even better terms from native dealers. If the foreigner has to ask for terms, both the moral effect and the advantage are lost.

The principal articles exported through the Maritime Customs at Newchwang during the years 1904, 1913, 1915, and 1918 were as follows:

Articles.	1904	1913	1915	1918
Beans....short tons..	121,825	90,823	134,135	86,677
Bean cake....do....	132,411	281,927	272,461	117,248
Bristles....do....	14	123	210	167
Cereals....do....	....	40,511	15,749	15,614
Coal....do....	....	344,356	293,195	65,076
Fish, dried and salt....do....	249	158	171	53
Ginseng, all kinds....do....	105	153	176	120
Hair, horse....do....	9	75	45	39
Hides....do....	43	251	17	....
Medicines....value..	$112,988	$197,597	$140,124	$272,375
Oil:				
Bean....tons..	4,784	7,531	4,018	480
Castor....do....	157	914	405	162
Samshu (Chinese wine)....do....	457	1,415	1,803	1,611
Seed....do....	1,317	1,575	1,061	423
Silk, wild and refuse....do....	852	725	1,067	383
Skins (fur)....pieces..	3,584	89,806	74,253	....
Tobacco....tons..	41	96	38	131
Wool....do....	....	....	75	....

While the above table may serve admirably in showing the various kinds of local products available for shipment abroad, its figures can not be taken as an indication of the trend of the trade of the entire district. The export trade of the district has increased greatly during the past decade, whereas the foreign trade of Newchwang has been steadily declining since 1911. This latter result is due principally to the phenomenal growth of the rival ports, Dairen and Antung, which have benefited at the expense of Newchwang through artificial aids to trade devised by the Japanese. The trade of Mukden and the other open marts in this district does not come under the cognizance of the Maritime Customs, and the statistics required for a precise estimate are not available.

A new article for export is found in crude talcum, of which large quantities are produced near Haicheng, an old Chinese town just north of the boundary of the Kwantung Leased Territory.

Direct exports to the United States consist chiefly of bristles, horsehair, and various kinds of skins. However, the bulk of the exports from Dairen to the United States is produced in this district—beans (from which the oil for export is expressed), hempseed, kaoliang (tall millet), and maize. The coal shipped from Dairen to the Philippine Islands comes from Fushun. Mukden is virtually a depot for the collection of native produce destined for transshipment to the coast, where the headquarters of the foreign firms are still located. Considerable export trade from this district is done indirectly through ports of transshipment, such as Kobe and Shanghai, so that there are native products, such as bean oil, maize, and kaoliang, which, though they eventually reach the United States, are not invoiced and certified to at the Mukden consulate general.

The following table shows the declared exports to the United States from the Mukden district during the calendar years 1917 and 1918:

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
Apricot kernels ..... pounds	22,400	$5,065		
Bristles:				
Pig ..... do	292,584	314,645	272,835	$377,292
Badger ..... do			176	815
Hair:				
Goat ..... do	332	144	7,634	5,743
Horse ..... do	114,681	77,847	253,051	164,549
Horse manes ..... do	18,372	6,864	6,800	2,669
Horsetails ..... do	20,266	13,261		
Hides, cow ..... do	41,272	18,695		
Skins (furs):				
Badger ..... number			991	3,284
Cat ..... do	83	141	5	18
Dog, mats ..... do	163,828	188,574	55,749	84,878
Ermine ..... do			1,275	2,052
Fox ..... do	7,524	54,268	37,667	385,262
Foxtails ..... do	11,878	4,799	3,364	1,597
Goat ..... do	14,699	19,238		
Kolinsky [1] ..... do			261,016	263,016
Lamb ..... do	405	7,071	1,720	11,976
Leopard ..... do			299	463
Lynx ..... do			114	718
Marmot ..... do	1,000	1,042	437,213	228,962
Marten ..... do			152	1,696
Mink, Jap. ..... do	4,800	687		
Opossum ..... do	1	1		
Sable ..... do	228	11,508	1,105	68,006
Rabbit ..... do	78	30		
Raccoon ..... do	11	46	3,839	19,416
Sheep ..... do	1,000	1,286	884	1,753
Squirrel ..... do	14,799	4,446	1,182,756	514,430
Squirrel tails ..... do	344	1,851	135	571
Weasel ..... do	181,501	78,469	63,500	21,601
Wildcat ..... do	76	322		
Wolf ..... do	94	353	1,684	9,604
Wolverine ..... do			1	21
Rubber, old ..... pounds	46,662	3,782		
Rugs, woolen ..... square yards	54	562		
Stamps, Chinese postage ..... number		800		
Wool, sheep ..... pounds			23,147	7,459
Yak tails ..... do			186	210
Total		815,792		2,177,761

[1] Kolinsky skins were classified as weasels in 1917 return.

The declared exports to the United States in 1913 were:

Articles.	1913		Articles.	1913	
	Quantity.	Value.		Quantity.	Value.
Bristles..............pounds..	109,931	$86,806	Skins—Continued.		
Household goods...packages..	29	1,196	Goat.............pieces..	31,368	$15,173
Sesame seeds........pounds..	2,240	107	Marmot............do....	300	137
Skins:					
Dog..............pieces..	13,536	10,816	Total....................	....	115,386
Fox................do....	192	1,151			

IMPORT TRADE.

The foreign import trade of this district has shown great development during the past decade. Along with the exploitation of the latent wealth-producing resources of the country has occurred the enhancement of the purchasing power of the natives. There is not the same prevalence of poverty in Manchuria as in China proper. Transportation facilities have greatly improved during this period, so that rail communication is now available between practically all the important centers. From these points to interior places, however, goods must be conveyed by means of native carts over poor roads. Generally speaking, the distributing facilities may be described as satisfactory. Following the revolution of 1911 the Chinese, especially the younger generation, including the students, showed a tendency to adopt foreign dress. They soon found, however, that foreign clothing was not only more expensive but less comfortable than native dress. Foreign boots, shoes, hats, hose, and underwear strongly appeal to the Chinese, and there is an appreciable demand for these commodities. This applies also to provisions and household effects. While the Chinese have to a great extent retained the native style of dress, much of the material used is of foreign manufacture, especially in the cotton fabrics. The Chinese, as a rule, favor foreign goods, being aware of their superior quality, and prefer American or European products to the Japanese, provided the prices are within their means.

Direct shipping facilities by rail and steamer exist between Japan and Manchuria. Shipments of goods from the United States and Europe are made via Kobe or Shanghai, at which points transshipments to coast steamers are necessary in order that the goods may reach either Dairen or Newchwang, the only two seaports that serve this district. Dairen is the leading port of entry, as its harbor has more extensive shipping and wharfage facilities than that of Newchwang. Moreover, the latter port, besides being closed with ice during four winter months, possesses a poor river channel and inadequate harbor and wharfage accommodations.

The German firms gave no credit for spot cargo, but allowed their customers two months with 1 per cent discount in which to clear their ordered cargo and settle exchange. Where there was competition they would cut the prices of well-established "chops" in order to get the business. They always quoted in sterling for ordered cargo and taels for spot cargo and arms and ammunition. The Russian firms do business only in spot cargo and give from 16 days' to one month's credit. The terms given by the Japanese are 16 days for spot cargo and one month for ordered cargo, secured on documents signed by the customers. Payments must be made in the gold yen (49.85 cents) or its equivalent. In cotton cloths, which are carried in stock, Mitsui & Co., the leading member of the Manchurian Cotton Exporters' Association, usually give 30 to 45 days' time, and occasionally up to two months. Some of the Chinese merchants buy outright from the Mitsui Co., while others sell for it on the ususal 2 per cent commission. Extensions of credit are made as required, the customers being charged interest, the rate in such cases often being high. The Japanese are very keen on securing trade at any cost, and when there is competition or a surplus stock to dispose of, they will sell at or below cost in order to get the business. In such cases they will also allow their customers two months or often 100 days for payment. British firms give two months' credit on ordered cargo and one month to 45 days on spot cargo, with an allowance of 33 sen ($0.164) for 1,000 yen ($498.50) per day for payment made before due date. Extensions of credit are made as required, the customers being charged a reasonable rate of interest. These credit systems are in use in normal circumstances; the European war has made it necessary for the foreign merchants to restrict them somewhat. Quotations should always be in gold and include duty as well as c. i. f. rates nearest available port of destination.

FUNCTIONS OF THE COMPRADOR.

As already explained, all transactions with the Chinese merchants must take place through the medium of the comprador. He is absolutely essential and without him no American firm can hope to carry on successful business. He must be conversant with Chinese business methods and acquainted with the weights and measures, methods of transportation, and traffic regulations, which vary in each district and on the different railways. He accepts responsibility for all money that passes through his hands, and this function alone—considering the many kinds of currency, the varying rates of exchange, and the prevalence of counterfeit money—makes him a necessity. As all payments go through his hands, and as he finds the customers and guarantees all transactions between them and the firm, he must be able to furnish adequate guaranties to his employer for all contracts entered into and all business transacted through him.

STORAGE PENDING SHIPMENT TO INTERIOR POINTS.

The distribution of goods for sale in the interior points is entirely in the hands of Chinese agents. Pending interior shipment the goods are stored in either railway warehouses or the warehouses of the importers. The rates for storage in railway warehouses are exceedingly high. Telegraphic communication is available only in the large centers, but communication with the smaller places is maintained by post over the poor roads.

SPECIAL TAXES.

Foreign goods that have paid the regular import duty at the port of entry and are intended for transshipment to any of the opened towns in Manchuria are entitled to an "exemption certificate," which protects them from further taxation en route or at destination. If the goods are intended for transshipment to the interior—that is, any place not a treaty mart—the owner has the option of paying the inland taxes or likin en route or of paying half the import duty additional, not exceeding a nominal 2½ per cent ad valorem, and obtaining a "transit pass." This certificate exempts the goods from all further inland charges. The provincial authorities make sporadic attempts to impose inland taxes on foreign goods in the hands of the native merchants. These taxes, with a few exceptions, amount to 3 per cent. A production tax is levied at the rate of 1½ per cent on all kinds of native produce originating in the Province, and a consumption or arrival tax is levied on foreign (a point still in dispute between the Chinese authorities and the consuls) and native goods alike at the rate of 2 per cent at the place where the goods are disposed of for sale. The foreign consuls have won their point so far that the Chinese authorities no longer attempt to tax foreign goods in an open mart, even when they are in Chinese hands. Numerous other taxes, such as 7, 4, and 9 per mille tax, the sea and hill tax, and the business tax, have been strenuously and successfully resisted. The Chinese assert that the business tax has nothing to do with foreign goods imported by foreigners, it being merely a tax on the business capital and selling turnover of Chinese merchants. There are some other special taxes, such as on salt, wine, tobacco, timber, plants, live stock, and vehicles. Foreigners hold that the treaties exempt them and their goods from the payment of these taxes and that goods of foreign origin retain that character until they pass into the hands of the Chinese purchaser. The practice has grown up among the large importing firms of compounding with the inland tax office for payment of provincial taxes. By a special arrangement, the former, by paying to the latter a stipulated amount per annum, becomes exempt from the payment of the internal taxes.

Foreign trade in Manchuria goes mostly up and down the foreign railway lines, upon which, and within the railway settlements attached to which, no likin taxation is permitted. All railway material comes in free of duty. Many interior cities have been opened to foreign trade and enterprise, at which foreign goods may be delivered upon payment of one import duty only, thus escaping the transit dues or in the alternative the likin charges levied in all other parts of China. Manufactories may be established by foreigners in any of the marts or railway settlements, and the products so far escape the taxation that Chinese factories in other parts of China have to pay. All railborne goods entering or leaving Manchuria via Antung enjoy a one-third duty reduction. For these reasons it may be conceded that as regards taxation the foreign trader occupies a more favored position in Manchuria than in any portion of China proper.

IMPORTANCE OF PACKING.

Special attention must be given to the packing of all goods intended for exportation to the Mukden district. The cases should be strong as they pass through many hands before reaching Mukden and many more before arriving at their destination in the interior. The severe climatic conditions must also be taken into consideration in preparing for shipment goods of a perishable character.

PRINCIPAL ARTICLES IMPORTED.

The principal articles imported through the Maritime Customs at Newchwang during the years 1904, 1913, 1915, and 1918 were as follows:

Articles.	1904	1913	1915	1918
Bags, gunny ... number	2,997,700	2,662,894	1,623,675	1,011,072
Candles ... short tons	549	$44,218	[a] 1	$10,282
Cigarettes ... value	$297,221	....	[b] 59,284	....
Cotton piece goods:				
Foreign—				
Cloth, Japanese ... yards	....	7,067,296	2,960,203	1,534,976
Flannel ... pieces	46,468	25,238	33,490	3,884
Italians ... do	88,670	11,813	58,244	13,225
Drills ... do	454,711	154,574	67,580	64,181
Jeans ... do	139,480	357,221	244,168	210,615
Sheetings ... do	1,148,884	354,410	188,515	103,720
Shirtings ... do	220,328	465,900	193,496	99,037
Chinese—				
Cloth, native nankeens ... tons	....	1,212	1,094	751
Drills ... pieces	....	4,035	76,375	77,350
Sheetings ... do	....	50,000	172,210	190,920
Cotton yarn:				
Foreign ... tons	10,421	5,458	3,374	1,905
Chinese ... do	....	274	1,340	2,896
Dyes ... value	$74,277	$181,605	$764	$27,141
tons	21	1,986	524	145
Flour ... value	$5,197	$4,648	....	....
Glass, window ... boxes	4,730	3,612	....	700
Iron and steel, and manufactures ... tons	....	7,471	3,158	418
Leather ... do	....	....	46	....
Machines, sewing and knitting ... value	....	....	$1,343	....
Machinery ... do	....	....	$3,768	....
Matches ... gross	1,891,265	884,653	554,225	128,789
Needles ... thousands	130,425	279,233	147,554	79,714
Oil, kerosene ... gallons	4,762,640	10,063,665	8,196,629	3,047,681
Paper ... tons	....	1,006	1,097	892
Soap ... value	....	$87,476	$46,256	$96,311
Sugar ... tons	17,336	14,489	13,702	13,611

[a] Tons. [b] Thousands.

As the bulk of the import trade of this district and of exports as well passes through Dairen and Antung, the table of Newchwang's import trade is of value chiefly as giving the principal goods entering the district.

Aside from cotton piece goods, kerosene, tobacco, and sewing machines, articles that find limited markets in which American manufacturers and exporters may be interested, are stoves, agricultural implements, tools, corrugated iron, roofing, watches, and bicycles. There is no appreciable demand as yet for automobiles, typewriters, furniture, and other articles that usually find markets where manufacturing is only fairly well developed. South Manchuria is chiefly devoted to agriculture, and the standard of living is low. In a rigorous climate such as this one would expect to find a more extensive use of woolen goods, especially as large quantities of low-grade wool are produced on the near-by plains of Mongolia; however, the items under "woolen goods" in the Maritime Customs returns appear insignificant. Twelve years ago American piece goods practically held the market in South Manchuria. To-day, out of a total of $24,000,000, the share of the United States is less than $2,000,000. This market has been taken by the Japanese. Russian cotton cloth is also much in evidence, but the supply is limited to prints. These Russian goods have forced their way into the market by reason of their good quality, suitability of design, and moderate price. Large stocks, long credits, and numerous agencies have also aided the trade in this line. The market for American flour has been erratic, depending chiefly upon the rate of silver and the wheat crop conditions in Manchuria and in America. There are a number of modern flour mills in Manchuria, and with good crops thay are able to obtain wheat at a price that enables them to compete successfully with American flour. The lumber trade, in which American mills took an important part in the past, has to a large extent been taken over by local lumber interests. However, a fair demand still exists in connection with the railways and its enterprises and for use in the better classes of buildings. Kerosene oil is carefully looked after by the Standard Oil Co. of New York, and the trade of that company has steadily increased. This company has agencies in all the principal markets of this district. The other articles in which American manufacturers take part have not assumed sufficient volume to call for comment.

DEVELOPMENT OF MARKETS FOR AMERICAN PRODUCTS.

Having regard to the simple requirements of these people, the development of trade in modern manufactures, machinery, household conveniences, implements, etc., is not a matter of competition so much as of education and the creation of a demand. That Chinese do not quickly take to foreign innovations is probably due to their lack of knowledge of foreign conditions and the instinctive desire to avoid experiments that may prove expensive and fruitless. They are not, however, slow to adopt new methods when convinced that there is advantage or profit in doing so. With regard to a large number of articles of American manufacture shown as coming into this market, the trade is fortuitous. Consumers have only heard of the articles. Many items are carried in stock at Shanghai and at Japanese ports and distributed to Manchuria through native merchants; other items are ordered spasmodically through local commission merchants or middlemen. The development of markets under existing conditions necessitates acquaintance with the peculiar customs and requirements through demonstrations and close and constant touch with the trade. In a number of lines American products are becoming better known and consequently gaining ground. Many local importers and merchants who have studied trade conditions in Manchuria are of the opinion that there are several lines of American goods for which fair markets could be developed if they were energetically pushed in the right way. Chief among these lines is cotton woven fabrics, other lines being agricultural implements, stoves, roofing, hardware, and watches. This effort, however, would require an extensive distributing organization having home affiliations supported by the manufacturers themselves, with the intention of doing a direct business, leaving out the brokers and trading companies so that all unnecessary charges may be eliminated. The organization in Manchuria should be built up with young men who would come out prepared to learn the language and customs of the people, to make the service a life career, and to cooperate with native assistants. It might be found profitable to conduct a joint import and export trade as the best method of minimizing the risks attendant upon the wide fluctuations in exchange values. American manufacturers should cooperate in sending out representatives to go over the field with this object in view. If intelligently handled such a distributing system would conduce to permanency as well as to the development of these markets.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

Of the three seaports serving South Manchuria—Dairen, Antung, and Newchwang—only the last named is located in the Mukden consular district. The foreign commerce of South Manchuria finds its chief entrepôt through Dairen. There are no direct shipping facilities between the United States and Newchwang. This port, situated near the mouth of the Liao River and connected with both the South Manchuria Railway and the Peking-Mukden Railway through branch lines, is provided with good facilities for transportation and connecting arrangements between railways and steamers. Except for the winter months, Newchwang is in direct steamer communication with the North China ports as well as Shanghai and the Chosen and Japanese ports. The Nippon Yusen Kaisha maintains a regular steamship service weekly with the important ports of Japan, making connection with the company's American line; this company also maintains a regular steamship service every third day between Newchwang and Tientsin. Jardine, Matheson & Co., Butterfield & Swire (both British), and the China Merchants Steam Navigation Co. (Chinese) maintain sailings every other day between Newchwang and Shanghai. The main inland water route is the Liao River, which is navigable for junks for several hundred miles as far as the Mongolian frontier. Because of the competition of the railways and the neglect of the river, this trade has been greatly reduced in recent years.

While the war has not affected the regular sailings on these lines, the freight and marine insurance rates have risen considerably and are constantly changing. In addition to the above companies in Newchwang that are in a position to attend to shipments, there are the firms of E. S. Leeds (British), Bandinel & Co. (British), and Reynaud & Colinet (French). The Mitsui Bussan Kaisha (Japanese) maintains a branch at Newchwang.

FACILITIES FOR TRAVEL.

South Manchuria is traversed by what is fast becoming a leading route of travel between Japan and China and between the Far East and Europe. The Japanese, Chinese, and Russian railway systems cooperate by maintaining connecting schedules and through ticket services on the passenger trains. Three railway lines converge at Mukden—the South Manchuria (Dairen-Changchun) Railway, the Peking-Mukden Railway, and the Antung-Mukden line—so that it is through Mukden that all, except the few whose business or inclination takes them via Vladivostok, must travel by railway from Japan and China proper into Europe or vice versa. Ordinarily there is a thrice-weekly express train service over all these lines, making connection with the Trans-Siberian route at Changchun, but owing to the European war the through service has been reduced to but one train a week. Six mail trains pass through Mukden daily over all the Japanese lines. On the Peking-Mukden line at present there is a weekly train de luxe, connecting with the Japanese and Russian through services, and two through trains with no sleeping cars; there are also two mail trains daily between Mukden and Peking.

The best hotels in South Manchuria are those managed by the South Manchuria Railway. Each is called the Yamato Hotel; in this district there are two, one at Mukden and one at Changchun.

They are conducted on the European plan, and their furnishings and cuisine are considered excellent. The charges range from 3.50 to 6 yen for a room per day, 1 yen for breakfast, 1.50 yen for luncheon, and 1.75 yen for dinner. The Yamato Hotel at Mukden forms part of the station building. The only hotel in Newchwang of European ownership and management is the Astor House. It is centrally located on the wharf. The charges are $5 to $7 Mex.[1] per day, including meals. The other towns of this district have semi-European hotels managed by Japanese, but their accommodations are poor. The charge is usually 5 yen per day, including meals.

South Manchuria may be visited at all seasons of the year. Travelers must be provided with Japanese currency within the Japanese railway zone and Chinese money everywhere else. American gold can always be converted into these currencies at a fair rate of exchange at the railway hotels. Passports are not required of travelers on the Japanese and Chinese railways.

TRADE ORGANIZATIONS IN DISTRICT.

Chinese chambers of commerce exist in all the cities and towns in this district of 25,000 or more population—that is, Mukden, Newchwang, Changchun, Hunchun, Liaoyang, Kaiyuan, Fushun, Tiehling, and Kirin. Their organization is practically the same in the different cities.

Their functions are to keep informed regarding the general conditions of trade; to study modern methods of trading; to endeavor to improve the quality of native products and to extend their market; and to decide disputes and claims between the merchants of the chamber and between the merchants and the government. The by-laws empower the chamber to impose fines upon any member guilty of forging trade-marks or engaging in any illegal trade.

These chambers exert considerable influence over the political and general administrative affairs of their districts, as, for instance, by opposing exorbitant taxes, assisting in the maintenance of order, regulating prices, etc., and they have much to do with the money exchange and banking. They also contribute funds for educational purposes and for charity. Their officers consist of a chairman, a vice chairman, a secretary, councillors, and managers. The Mukden chamber has more than 1,000 members, each paying a subscription every four months, ranging from $1 to $50, small coin, according to volume of business. The city is divided into 16 districts, each of which has its own branch chamber under the control of the general chamber.

Through the efforts of the American consulate general, an American section of the Chinese Chamber of Commerce of Mukden has been organized. A special space has been allotted for American catalogues and trade publications.

Besides the chamber of commerce there are in Mukden an artisans' guild, an agricultural guild, and a money-exchange guild. The functions of the last-named are to fix the daily rates of exchange, to enforce the regulations governing exchange operations, to see that settlements are promptly made at the time stipulated in forward contracts, and to arbitrate disputes between the brokers and the exchange shops.

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[1] See footnote on p. 84.

Its officers consist of a president, a vice president, and a staff of five executives. This guild has 198 members, who bear equally the working expenses computed at the end of every month.

There is a Japanese chamber of commerce at Mukden and all the other towns mentioned above. The functions of each of these bodies embrace the following: Investigating with regard to the development of trade and industry; presenting to the authorities its views relating to the drafting, revising, and enforcing of trade regulations; replying to questions put before it by the authorities; compiling and publishing trade statistics; certifying as to prices of merchandise and places of production; nominating at the request of the authorities appraisers and witnesses; arbitrating trade disputes, etc. Its officers consist of a president, a vice president, five standing committees, and clerks. The membership is limited to 15.

In addition to the Chinese and the Japanese chambers there is also a foreign chamber of commerce at Newchwang.

AMERICAN INTERESTS.

American interests in South Manchuria are principally commercial and missionary, and while they are relatively small at present, yet prospectively they are considerable. Six American firms are engaged in trade in the Mukden consular district, while there are 34 American residents there. American trade is being slowly but none the less surely extended as a result of two decades of effort. Merchants and missionaries are extending American enterprise throughout the district. Geographically, politically, and economically, those interests, as a component part of the general American interests in the Far East, call for the safeguarding of the position of equality of opportunity that Americans have always assumed in Manchuria.

The Seventh-day Adventist is the only American missionary society operating in Manchuria. In the autumn of 1914 two families settled in Mukden to inaugurate its work. In 1915 the society acquired a large site favorably situated in the western suburbs of Mukden, and it was planned to erect two mission residences and later a school. Another family was added late in 1915, and a physician and other workers were expected to join the forces soon. Thus far the work carried on has been mostly evangelical. Plans are under way, however, to establish boys' and girls' schools, as well as dispensaries, in connection with the evangelical work. Besides Mukden, chapels have been opened in Liaoyang and Tiehling, as well as in North Manchuria, and within a short time a foreign family will open up the work in Changchun and locate there.

South Manchuria has long been an important center of Scotch and Irish missionary activity. The Presbyterian congregation in Mukden is the strongest in Manchuria, both numerically and financially. Throughout the Province there are 32 congregations and 117 outstations. Expansion led in 1897 to the creation of a synod of Manchuria, which is now joined with China proper to form the General Assembly of the Presbyterian Church of China. Christian literature is provided and distributed by the British and Foreign Bible Society, which has maintained an agency in Mukden since 1883. The present head of this society maintains a school and industrial home for blind girls, where about 40 girls are cared for and taught knitting and other similar occupations. The Presbyterian church in Manchuria numbers 14,561 men, 6,596 women, and 4,779 children; it has also 22 foreign and 17 Chinese pastors and 939 native deacons, with 1,420 active workers. The varied and extensive work of these missions along educational and medical lines has already been described (see p. 213).

In the diocese of Mukden there are 30 missionaries of La Société des Missions Etrangères de Paris, who have 70 churches and 18,000 Christians. There is an orphanage at Mukden under the guidance of three Soeurs de la Providence. At this institution 100 abandoned children are fed, clothed, and educated.

American commercial interests in this district, except as represented in the importation of a few staple American products, are confined to general lines of imports and exports, and are expanding but slowly. It is to be admitted, however, that in commercial and other nonmissionary lines of activity American interests compare favorably with those of the European nations in the field.

The effects, direct and indirect, of the protracted war in Europe on American trade interests have been adverse. The cost of all foreign goods has increased and this increase has affected considerably the prices of native commodities. The only country that has been gaining is Japan.

The most promising fields for American commercial activity are described on page 241.

GENERAL TRADE SUGGESTIONS.

The need for reliable American import and export firms and the lack of direct shipping as well as banking facilities constitute the chief obstacles to the development of American trade with Manchuria. Under present conditions American exporters are compelled to look to their natural competitors to convey their goods to the country of destination, and to sell and distribute them. Moreover, if there were an American bank in Manchuria, the American gold dollar could be used in business quotations and transactions, and letters of credit could be issued in terms of gold dollars directly by the bank in one country, payable to the exporter at the bank in the other country, instead of the more expensive and roundabout way of commissioning London banks to issue sterling letters of credit to settle obligations in either country. It is believed that the present is an especially favorable time for Americans to make a bid for a share of this market. American manufacturers, or a combination of them, whether exporters of competitive or noncompetitive articles, should establish a selling organization with agencies at the principal markets; have its own technical experts and salesmen; offer goods suited to the market; carry stocks at the distributing centers from which any quantity desired can be sold; give away samples; advertise extensively; and grant long credits. In some lines it is believed that such a system could be adopted with profit and with a prospect of permanence. In most lines, when American products have once become well known, they gain ground.

As to the trade in American cotton goods, it is suggested that the present would be an opportune time for the leading American manufacturers and exporters to combine in sending a representative to investigate the conditions surrounding this trade with a view to establishing an extensive American-managed distributing agency in Manchuria. Such a syndicate might well include capitalists who have investments in banking institutions and steamship lines interested in Far Eastern trade. At the same time the American mills should manufacture a line of piece goods especially for this market at prices competing favorably with Japanese lines. The local agency would have to be given strong support and be permitted to grant terms as favorable as those extended by any of the competitors in these lines, Japanese or European. Stocks should be carried at the principal distributing centers and the goods should be shipped via Japan and Chosen to Antung or directly to Dairen, instead of to Shanghai, in order that advantage may be taken of the one-third reduction of customs duty at Antung on rail-borne goods and of the reduced through freight rates on the Japanese railways, which were designed to favor both Antung and Dairen. As these are the shortest and cheapest routes for American goods destined for the Manchurian market, they should be used by American manufacturers and exporters; American trade would thus share the facilities and secure the benefit of the modern business machinery that Japan is providing for its own commercial development in Manchuria. To take such a step now would possibly mean the recovery of some of the piece-goods trade that has been taken away from the United States in the past 10 years. American manufacturers may expect to share in the prosperity of the district if they are willing to make a serious concerted effort to participate in the trade.

In promoting trade relations in Manchuria it seems advisable as well as practicable for American commercial interests to act through, and in certain instances to combine with, the Japanese, who possess such superior facilities for handling this trade. Broadly speaking, from the economic point of view, it seems more advisable for American merchants to work in concert with the Japanese than to attempt to compete with them in Manchuria—at least until the obstacles mentioned above shall have been removed. At the same time Chinese officials and merchants are anxious for American business houses to establish distinctively American branches or agencies in this and other parts of Manchuria. They invite American capital to be used in developing commercial and industrial enterprises there and urge that direct transportation and banking facilities with the United States be arranged.

SHANGHAI CONSULAR DISTRICT.

By Consul General Thomas Sammons.

LOCATION AND AREA.

The Shanghai consular district comprises the Province of Chekiang and that part of the Province of Kiangsu south of the Yangtze River, except the prefectures of Kiangning and Chuikiang in the northwest corner. It is situated on the east coast of China.

The Province of Chekiang is situated between 27° and 31° north latitude and 118° and 122° east longitude. That part of Kiangsu Province which is included in this district is situated between latitude 30° 45′ and 32° and longitude 119° and 122°. In latitude the whole district corresponds approximately to the position of Texas.

The area of Chekiang Province is 36,670 square miles, and the area of that part of Kiangsu Province included in the Shanghai district is about 12,867 square miles; making a total of approximately 49,537 square miles, which is just a little larger than the State of New York.

POPULATION.

The Maritime Customs estimate for 1910 gives 23,980,000 as the population for Kiangsu Province and 11,800,000 for Chekiang Province; whereas the census taken by the Minchengpu (Department of Civil Affairs) in Peking for the same year gives 17,300,000 for Kiangsu Province and 17,000,000 for Chekiang Province. The former is accepted as being more nearly accurate. It is estimated that the population of this entire district is about 25,000,000, for while only about one-third of the area of Kiangsu Province is included in this district, it is the most densely populated section and includes about one-half of the total population.

The urban population of the principal ports of this district is estimated at more than 3,165,000, divided as follows: Shanghai, 1,500,000; Soochow, 500,000; Hangchow, 600,000; Ningpo, 465,000; and Wenchow, 100,000.

The density of the population for Chekiang is given as 463 per square mile, and for Kiangsu as 448 per square mile. The State of Rhode Island, according to the census of 1910, has, in the United States, the most nearly corresponding density of population, namely, 508.5 to the square mile.

PHYSICAL FEATURES.

Chekiang is a Province of wooded hills and fertile valleys. The west and south are mountainous and are not so densely populated as the richer districts on the east and north. The inland hills, the many rivers, and the groups of islands make Chekiang one of the most picturesque of the Provinces of China.

Kiangsu Province is a fertile plain crossed by the Yangtze River from east to west and by the Grand Canal from north to south. It has been called "the garden of China."

CLIMATE.

Three seasons prevail in this district—the winter monsoon, comprising the six months from September to February; the middle monsoon, from March to mid-April; and the summer monsoon, lasting from April to the end of August.

March is a month of variable winds, but with a marked prevalence of southeast winds. In April the summer monsoon sets in. In May it begins to blow from the southeast and continues until August. At the beginning of September the winds change suddenly, and the new monsoon, with its northeast, north, and northwest winds, lasts until spring, but the winds lack the regularity and strength of those of the summer monsoon season. May and June, as well as October and November, are generally ideal months. The heated term commences in July and often lasts until the end of September. The excessive heat is, however, often relieved by stiff breezes and heavy thunderstorms. December is sometimes a pleasant month, but January, February, and March are disagreeable months, it generally being very cold and damp. There is usually a little snow in February, but ice rarely exceeds three-fourths of an inch in thickness in ponds and ditches, although ice over an inch in thickness was formed during the 1916-1917 season.

The following figures, compiled from data kindly furnished by the Rev. R. P. H. Gauthier at the Sikawei Observatory, show the average rainfall per year for the 10 years ending in 1910, the average number of days per year on which rain fell during the same period, and the minimum and maximum temperature; also the average temperature for the year 1916. The figures given for Nanking (except the average temperature, which is also for the year 1916) are for the 5 years ending in 1910.

Districts.	Temperature.			Rainfall.	
	Highest.	Lowest.	Average.	Number of days.	Inches.
	°F.	°F.	°F.		
Nanking, or northwestern	104	14	59	137	44.0
Shanghai, or northeastern	103	10	59	133	45.7
Ningpo, or middle eastern	108	13	62	144	52.4
Wenchow, or southeastern	104	22	65	170	61.3

POLITICAL SUBDIVISIONS.

The provincial governments are made up of military governors at each capital, with commissioners of defense at each important military point; civil governors, with a bureau of foreign affairs, and with branch bureaus of foreign affairs at each treaty port; provincial departments of finance, under which are the various revenue bureaus, including the customs administration at each port; the department of justice, which consists of the provincial high courts, the courts of chief procurators, metropolitan courts, police courts, etc.; also the taoyin (intendants) of circuits located at each of the principal cities, with numerous magistrates under them at important centers, who have court jurisdiction over the neighboring territory.

The foreign residents of Shanghai, as at all open ports, are subject to the immediate control of their consuls in judicial matters. British subjects are under the jurisdiction of the British Supreme Court for China, opened in September, 1865. In 1906 the United States Court for China was established on lines similar to the British Supreme Court.

Chinese citizens resident in the International Settlement at Shanghai are under the jurisdiction of the Shanghai Mixed Court, established in 1864. Cases in this court are heard by a Chinese magistrate and a foreign assessor who acts as the deputy of his consul general. The consulates at present having regular assessors are the American, British, Italian, and Japanese. Assessors from other consulates sit only in cases that concern the interests of their own nationals. Chinese law, modified to an extent by foreign procedure, is the law of the court; and its language is Chinese. Foreigners of such nations as have not acquired extraterritorial privileges by treaty and are not represented by consuls also come under the jurisdiction of the Mixed Court; at the present time this provision also includes German and Austrian subjects, whose consular officers have been withdrawn from China. The French Concession has its own Mixed Court on the same lines, the assessor being the deputy of the French consul general.

A Court of Consuls, established in 1870, enables the public to sue the municipal council of the International Settlement.

In local affairs, the International Settlement of Shanghai is governed by the municipal council, which consists of nine members of various nationalities elected annually by the ratepayers. These members are chosen from among the most prominent business men of Shanghai and give their services free. Ratepayers are householders who pay taxes on an assessed rental value of at least 500 taels, or who are owners of land to the value of 500 taels.

The French Concession is governed by a council of its own consisting of eight members, of which four are French and the four others are of different nationalities. Their resolutions are subject to the sanction of the French consul general. Four members retire annually and new members are elected by all owners of land or occupants of houses paying a rental of 1,000 francs per annum, or residents with an annual income of 4,000 francs.

Meetings of ratepayers of the International Settlement are held annually in March, at which time budgets for the coming year are voted upon, the report of the previous year passed upon, and the incoming council instructed as to the policy to be pursued. No important measure can be undertaken without reference to a meeting of ratepayers, any 25 of whom can call a special meeting and whose decisions are of equal validity with the decisions reached at the regular annual meetings. The cosmopolitan system of government has worked, in general, very satisfactorily during the past. The international municipal council is divided into departments, as follows: Public works; police; fire; health; educational; electrical; and financial.

The French Concession is managed on practically the same lines as the international municipal council, but on a much smaller scale, the French having no electrical department. Electricity for the French municipal council is furnished by a French private concern.

The natives outside of the French and International Settlements are governed by the native authorities.

Title deeds for land in the foreign settlements are issued at the present time by the commissioner for foreign affairs and the taoyin (intendant) of Shanghai, who jointly affix their seals thereto.

In recent years there has functioned an office known as the "Hui Chang Chu," or joint measurement office, the duties of which are, as its name indicates, to make the official measurements of land, in conjunction with the municipal cadastral office, and in the presence of representatives of the foreign renter and of the consulate of his native country.

The taoyin, or intendant of circuit, has charge of purely native civil affairs. Up to a very recent date the special envoy of foreign affairs held also the office of taoyin.

There are native police stations scattered over the districts around Shanghai, and these are under the control of a superintendent who is, in turn, responsible to the taoyin.

The military governor of Shanghai has charge of the arsenal and resides there; the movements of Chinese troops, etc., are all under his control.

The Chinese Maritime Customs at Shanghai, as at all other treaty ports, is under the direction of a commissioner of customs, who takes his orders from the Inspector General of Customs at Peking. The headquarters of the customs authorities in Shanghai is situated on the Bund facing the river. The superintendent of customs grants permission for the importation and exportation of contraband goods.

EDUCATION.

There are 50 institutions in Shanghai for the education of Chinese, of which about 30 are conducted by missionary societies. There are 5 municipal schools, 8 schools under Chinese management, and 7 special schools and colleges.

The most important of the last-named is St. John's University, situated at Jessfield, which was incorporated under the laws of the District of Columbia, and, by its charter, is authorized to confer upon its graduates the degrees conferred by the universities in the United States.

The other important institutions are the Government Institute of Technology, on Sikawei Road; the Fuhtan College, also at Sikawei; the German Medical School (recently moved to Woosung); the Harvard Medical School for China; the Nanyang Railway and Mining College, on North Szechwan Road; and the Aurora University, a Roman Catholic institution, on Avenue Dubail.

There are 14 schools for the education of foreign children, among which are 2 public schools for boys and girls; 2 schools for boys and girls known as the Thomas Hanbury Schools, which are under the control of the international municipal council; the French Municipal School, under the French municipal council; the Shanghai American school, which, though but recently established, is proving a great success; the Jewell school, American; the Cathedral school, British; the Shanghai High School and Kindergarten, British; the St. Xavier School for boys; the St. Joseph's institution for girls, and two others, managed by the Roman Catholic Missions. There is also a school for Jewish children, and one for German children, as well as two schools for Japanese. With the exception of the American and German schools, all the schools are operated on British school lines, preparing children for the Cambridge local examinations. Higher education is not available in Shanghai for the children of foreigners, and those who can afford it send their children home for such higher education. A very few have recently entered the Hongkong University, which, owing to its proximity to Shanghai, will probably later play an important part in the higher education of foreign children living in Shanghai.

There are approximately 10,000 Chinese pupils in the various schools established for their benefit. Children of foreign parents attending school, excluding Japanese, number approximately 2,900.

Besides the above, a considerable number of Chinese children are doubtless being taught under the old-style Chinese teachers, each teacher having, on an average, between 20 and 30 pupils. Statistics concerning the education of this character are not available, as none are published. Each of these schools is run by a single tutor for his own benefit. Schools of this kind are to be found all over the towns and in the suburbs, and the tutors eke out a precarious existence, as the pupils belong to the poorer classes. It is not practicable to give an estimate of the literacy of the population of this district, but the general opinion is that the masses are generally uneducated.

The demand for foreign school supplies, especially furniture, is very limited. Most of the furniture can be turned out locally, according to patterns supplied, much more cheaply than it could be imported. Scientific supplies, of course, have to be imported. A school operated by British people will generally import its requirements from Great Britain, and persons from other countries generally import from their own home country.

AGRICULTURE.

The district around Shanghai is preeminently agricultural. The soil is very fertile, consisting of alluvia carried down by the Yangtze; and the latitude, together with the fact that the rainfall is pretty evenly distributed throughout the year, permits the production of two crops a year. The spring crops, gathered in May and June, consist principally of wheat, barley, rape, and beans. The fall crops, gathered in September and October, are mainly cotton and rice.

In the cultivation of their farms, the Chinese still adhere to antiquated methods, and, so far as indications now go, no early improvement can be looked for in this respect. So long as the earning power of the population remains as low as it now is, it is hardly possible to expect the Chinese farmers to invest in modern implements, fertilizers, etc.

An experimental poultry farm, operated on foreign lines, has been established, and it is understood that it has been fairly successful up to the present time. It is called the Kiangnan Poultry Farm and is located near the Shanghai-Nanking Railway Station. The exportation of eggs and egg products is assuming an important place in the trade of this port, and this should contribute to make poultry farming very profitable.

Although considerable quantities of mining products pass through the port of Shanghai, there are no mining activities in this district.

COMMUNICATIONS BY WATER.

Shanghai is considered to be the chief port of northern China for the transportation of products to the outside world, and of imports from the whole world to the interior of China. Vessels drawing not more than 24 feet of water may navigate the Whangpoo River to Shanghai if the masters so desire, though most of the larger mail steamers anchor at the Woosung outer anchorage about 14 miles from the Shanghai customs wharf.

As an indication of the importance of the shipping of Shanghai the following figures, showing the tonnage of steamers and sailing craft, foreign and native owned, cleared and entered at Shanghai, are given for the five years ended in 1917: 1913, 19,580,151 tons; 1914, 18,950,918 tons; 1915, 16,849,638 tons; 1916, 16,819,095 tons; 1917, 15,716,017 tons.

Besides the above, many small ships and barges clear for inland ports, the total clearances and entries being: 1913, 174,466 tons; 1914, 319,804 tons; 1915, 357,192 tons; 1916, 169,880 tons; 1917, 174,466 tons. In addition, more than 16,000 junks and 1,500 steam launches entered and cleared from and to interior ports during 1917.

Shanghai has direct steamship communication with the principal ports in Europe and America. Lines also run to and from Australia, India and Japan. Steamers leave daily for coast and river ports. Motor launches, steam launches, and junks ply regularly in inland waters.

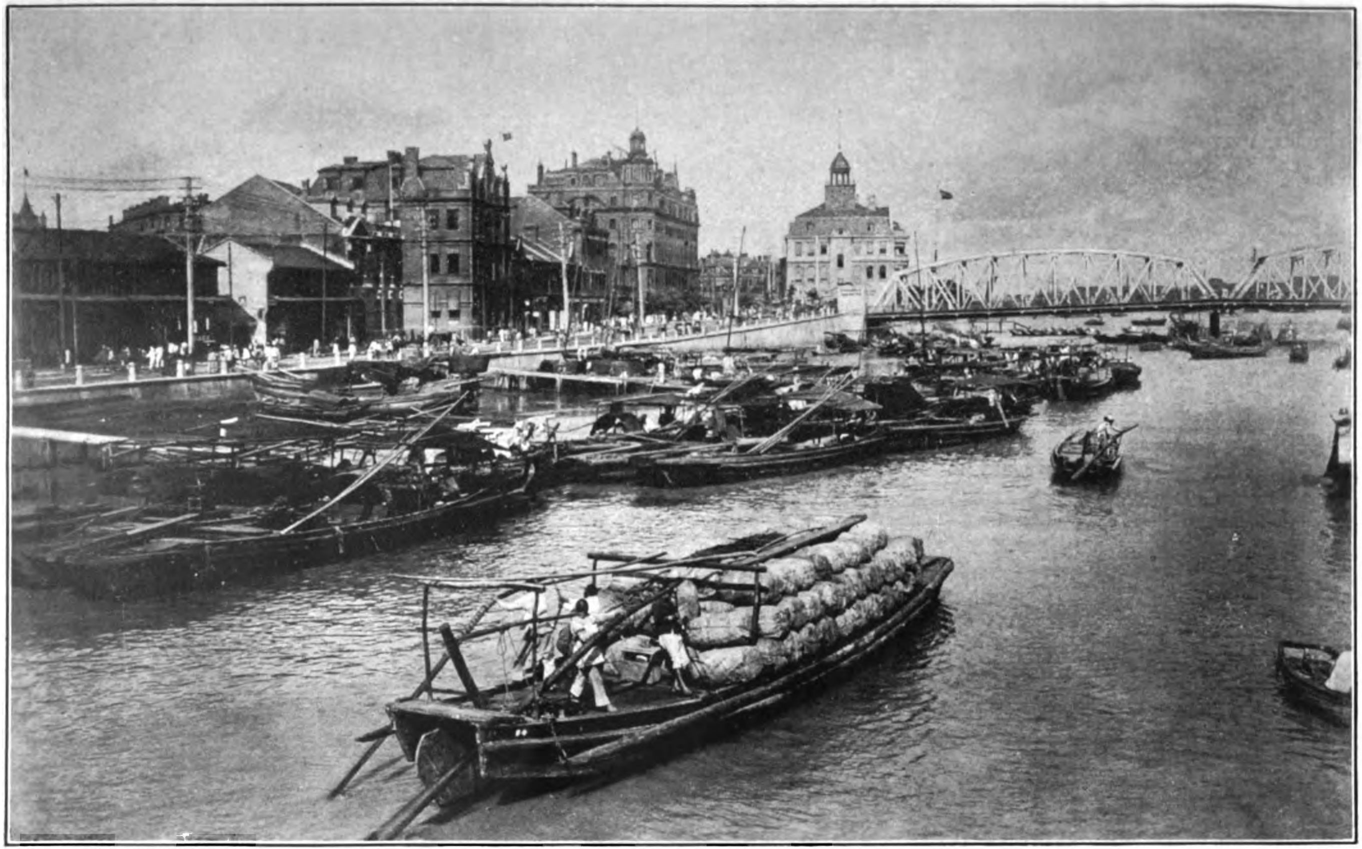
In general, it is understood that foreign goods imported into Shanghai pay the usual 5 per cent or specific duty and, by paying an additional one-half of the duty so levied, are entitled to a "transit pass," which is supposed to carry the goods to any interior port free of all further charges.

The transportation rates in normal times, per ton of 40 cubic feet (general goods), are approximately as follows: To London, $13.60 gold; to New York, via London, $16.36; to Marseille and Havre, $13.37; to Pacific Coast ports, $8. To New York, via the Pacific, on general goods, the rates range from $2.25 to $6 gold for 100 pounds.

At the present time (May 1, 1919) freight rates to the Pacific coast on general goods range from $15 to $35 gold per ton, except on raw or wild silk, on which latter the rate is $7.50 per 100 pounds. The present rate on silk goods, including pongee silks, is $25 for 40 cubic feet, plus 1 per cent ad valorem.

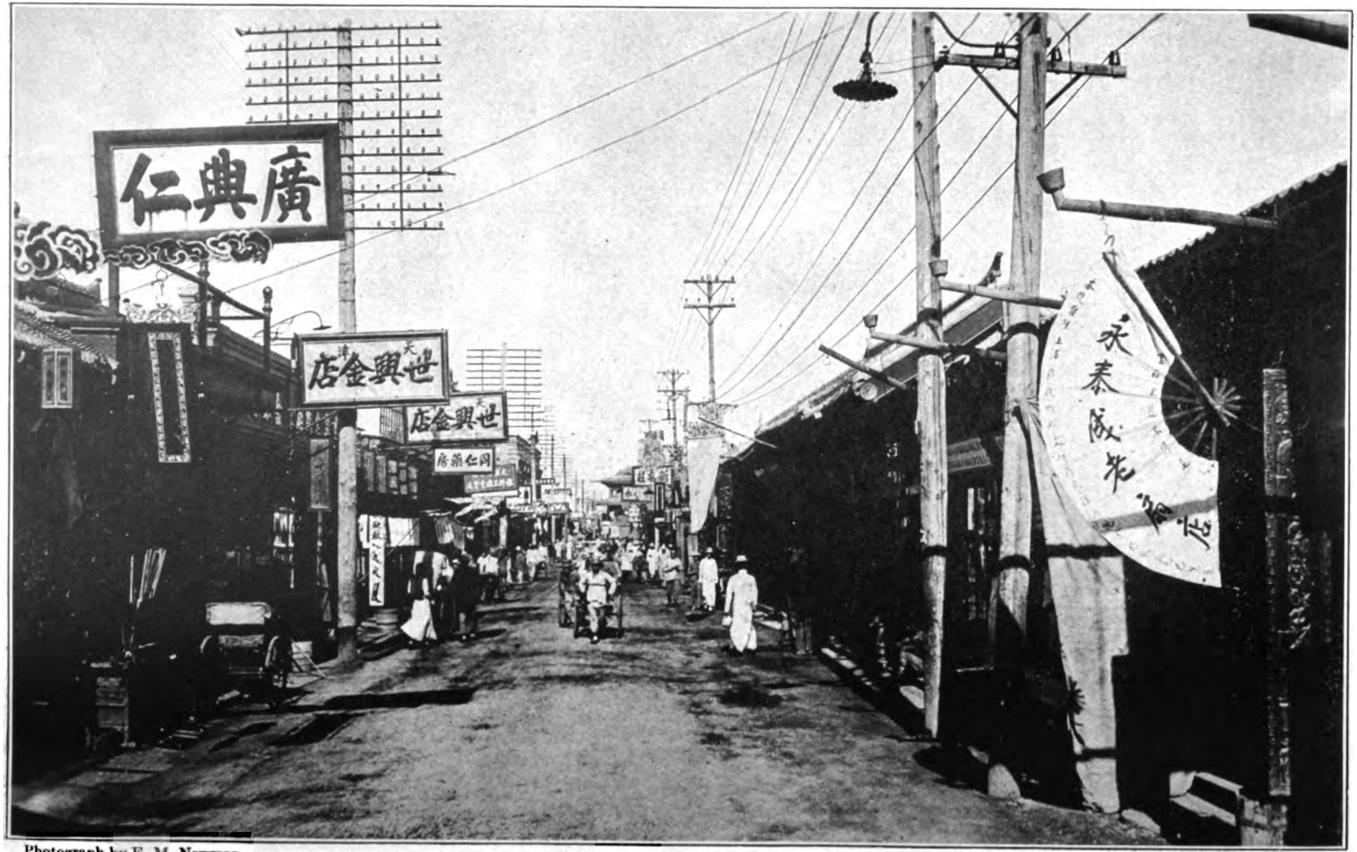
Freight rates from coal ports in Japan are normally $0.50 to $0.55 gold per ton, but at the present time they are approximately $1.50 per ton.

The following are the passenger rates to the principal foreign ports, alphabetically arranged, the prices being given in United States currency; where different prices are given for any one port, the difference in fare is governed by the different classes of steamers to that port:



Photograph by E. M. Newman.

FIG. 24.—AMERICAN MERCHANDISE AT SHANGHAI.



Photograph by E. M. Newman.

FIG. 25.—STREET SCENE IN SHANGHAI.

Ports.	First class.	Second class.	Third class.	Ports.	First class.	Second class.	Third class.
Aden	$220	$150		Nagasaki	$15-20	$8-11	$4-5
Bombay	$177-185	107		New York	220		
Brindisi	341	263		Port Darwin	130	80	
Brisbane	200	127		Portland	160		
Cape Town	265	175	$73	Port Said	244-321	185-234	
Colombo	145-151	$70-113	28	Penang	64	48	34
Durban	250	165	70	Saigon	63-64	50-51	
Gibraltar	341	244		San Francisco	175-225	112	51-102
Hongkong	25-33	13-22	7	Seattle	175-225	112	51-102
Honolulu	160	80	45	Singapore	67	44-51	
Kobe	26-39	10-19	$7-8	Sydney	214	139	
London	277-350	205-253	90-96	Tacoma	145		
Malakka	59	44	18	Tangier	341	244	
Malta	341	244		Vancouver	175-225	87-105	55-72
Manila	45	22		Victoria	175-225	87-105	55-72
Marseille	263-341	191-244	88	Vladivostók	45	27	12
Melbourne	219	141		Yokohama	32-44	13-22	8-9
Moji	20						

The following are the rates, in Mexican currency[1], of steamship fares from Shanghai to the various China ports visited more or less regularly by coastwise vessels:

Places.	One-way fare.	Round-trip fare.	Places.	One-way fare.	Round-trip fare.
	$ Mex.	*$ Mex.*		*$ Mex.*	*$ Mex.*
Amoy	40	60	Kiukiang	40	60
Antung	45	75	Nanking	40	60
Canton	55	85	Newchwang	55	85
Chefoo	35	55	Ningpo	10	15
Chemulpo (Korea)	40	60	Swatow	40	60
Chinwangtao	50	75	Takao	50	
Chinkiang	40	60	Tientsin	55	95
Dairen	40	64	Tsingtau	30	48
Foochow	30		Weihaiwei	35	55
Hankow	40	60	Wuhu	40	60
Keelung	30				

RAILWAYS.

There are approximately 379 miles of railway in this district, as follows: The Shanghai-Nanking Railway from Shanghai to Nanking, a little more than 193 miles long; the Shanghai-Hangchow-Ningpo Railway from Shanghai to Zahkow, a little more than 159½ miles long; and the Ningpo Section (part of the Shanghai-Hangchow-Ningpo Railway system, though not connected to it) from Ningpo to the Tsao Ngo River, a little more than 48⅓ miles long. The Shanghai-Nanking Railway and the Shanghai-Hangchow-Ningpo Railway lines are connected, in the vicinity of Shanghai, with a junction line about 10 miles long, which mileage is included in the figures given for the Shanghai-Hangchow-Ningpo Railway. This junction line was completed in 1916.

The Shanghai-Nanking Railway has one branch line running from Shanghai to Woosung, a distance of a trifle less than 10½ miles; and the Shanghai-Hangchow-Ningpo Railway has one branch line called the Kiangshoo Branch Line, running from Hangchow to Konzenchiao, a distance of approximately 6 miles. The operation of all these lines is now practically in the hands of the British.

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[1] See footnote on p. 84.

The double tracking of the entire Shanghai-Nanking line is now contemplated, and provision has already been made for the double tracking of that portion of the line—nearly 53½ miles—between Shanghai and Soochow. There should be an opportunity for the use of American materials in the double tracking of the rest of this line.

The rolling stock of the Shanghai-Nanking Railway, which consists of 31 locomotives, ranging from 32 to 102 tons gross; 17 saloon and first-class cars; 9 first and second class composite cars; 1 first, second, and third class and brake composite car; 2 second-class lavatory cars; 49 third-class cars; 1 luggage and treasure van; 19 coolie or fourth-class cars; 3 brake and mail vans; 166 covered goods cars; 56 medium-sized wagons; 36 small-sized wagons; 20 cattle wagons; 2 horse boxes; 3 flat wagons; 1 kerosene tank wagon; 2 cylindrical oil tanks; 10 steel bogie brake vans; 4 market wagons; and 3 breakdown wagons. This rolling stock is practically all of British manufacture.

The rolling stock of the Shanghai-Hangchow-Ningpo Railway consists of 36 locomotives, ranging from 4½ to 87 tons gross; 9 first-class cars; 11 second-class cars; 60 third-class cars; 10 coolie or fourth-class cars; 8 composite first and second class cars; 2 kitchen cars; 9 brake vans; and 2 postal vans. This rolling stock is of British, German, Belgian, and American manufacture, in varying proportions, with the largest proportion of British manufacture.

The Shanghai-Nanking Railway was constructed by the British at a cost of about 18,716,690 taels.[1] This includes the Woosung branch. The Shanghai-Hangchow-Ningpo Railway was constructed from funds (amounting to $9,796,000 Mex.) raised by the provincial bureaus, which had objected to the introduction of foreign capital. It was opened to traffic in 1909. The cost of the Ningpo-Tsao-Ngo-River section, which was opened to traffic in 1915, is unknown.

There are four through trains daily each way between Shanghai and Zahkow on the Shanghai-Hangchow-Pukow Railway, one train each way between Kashing and Zahkow, and five trains daily each way between Zahkow and Konzenchiao. Two of the through trains are fast trains, one is a slow train, stopping at all stations en route, and the other is a coolie and goods train. There are five trains daily each way between Shanghai and Nanking on the Shanghai-Nanking Railway, four of which are fast trains and the other a slow train for third and fourth class passengers, stopping at nearly every station. The fast trains are made up of first, second, and third class cars. Night trains have sleeping cars that are quite comfortable.

One train daily each way on the Shanghai-Nanking Railway makes direct connections with the Tientsin-Pukow Railway at Nanking, and the Shanghai-Hangchow line makes the same connections through connections with the Shanghai-Nanking lines.

The through passenger fares from Shanghai to Nanking on the Shanghai-Nanking Railway are $8.40 Mex., $4.20 Mex., $2.10 Mex., and $1.60 Mex. (approximately 4⅖, 2⅕, 1 1/10, and ⅘ cents per mile for first, second, third and fourth class passengers, respectively). Approximately the same rates per mile apply on the Shanghai-Hangchow-Ningpo Railway and the branch lines of each railway. The through fares from Shanghai to Zahkow on the Shanghai-Hangchow-Ningpo Railway are $5.40 Mex., $2.70 Mex., $1.75 Mex., and $0.95 Mex., for first, second, third, and fourth class passengers, respectively. The lowest single fare on these railways is $0.20 Mex., $0.10 Mex., and $0.05 Mex., for first, second, third, and fourth class passengers, respectively.

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[1] The word "taels" as used in this report from the Shanghai consular district refers to the Shanghai tael, the average value of which is normally about $0.65 United States currency. The expression "$Mex." has reference to Mexican dollars, the average value of which is about $0.43 United States currency. The values of the Shanghai tael and the Mexican dollar, in United States currency, on January 1, 1919, were about $1.08 and $0.78, respectively, illustrating the constant fluctuation characteristic of money exchange values in China. Where the word "gold" appears, or where the $ sign is used without qualification, United States currency is meant.

Baggage may be carried free as follows: First class, 267 pounds; second class, 200 pounds; third and fourth class, 133 pounds. Three cents Mex. per mile is charged for each 4 pounds in excess of the free allowance, subject to a minimum charge for 68 pounds.

The fast express trains from Shanghai to Nanking make the run in 6⅓ hours, averaging over 30½ miles an hour, including 13 stops. The fast express trains from Shanghai to Zahkow make the run in 4⅔ hours, averaging over 26 miles an hour, including 19 stops.

The charges for parcels on express trains of the Shanghai-Nanking Railway are as follows, the prices being given in Mexican currency:

Distance in miles.	Up to 26 pounds.	27–40 pounds.	41–53 pounds.	54–66 pounds.	67–133 pounds.
	$Mex.	*$Mex.*	*$Mex.*	*$Mex.*	*$Mex.*
Up to 50	0.25	0.25	0.25	0.25	0.40
51 to 100	.25	.30	.40	.50	.70
101 to 150	.30	.45	.60	.75	1.00
151 to 200	.40	.60	.80	1.00	1.00
201 to 300	.50	.80	1.00	1.00	1.50
301 to 400	.60	1.00	1.00	1.00	2.00

Packages exceeding 133 pounds in weight, or 8 cubic feet in measurement, will not be accepted as parcels.

Freights are divided into four general classes on the Shanghai-Nanking Railway, as follows:

"*X*" *class*, consisting of such goods as acids, mineral; ammunition; benzine; explosives; gases of all kinds in cylinders; gasoline; petroleum; and spirits, rectified.

First class, consisting of such goods as calcium carbide; clocks and watches; engravings; feathers; furs; glass; gold and silver lace and thread; jewelry and trinkets; laces; paintings; paper; straw hats; flowers; photographic and scientific instruments; pictures; plated articles; satins; silverware; and velvets.

Second class, consisting of such goods as art pottery; bamboo ware; bedsteads, wooden; brass ware and copperware, fancy; chinaware; crackers; cutlery; ebony; india-rubber goods; ivory; plants and trees (at railway risk); quicksilver; and silk cloth.

Third class, subdivided into 10 classes, "A" to "J," as follows:

"*A*," consisting of such articles as baskets and boxes, empty; blackwood; camphorwood; hats and caps, other than straw; chemicals and drugs, ordinary; cork; cotton, loose; ribbons; crockery (at owner's risk); eatables, sweet (at railway risk); flowers; furniture; hair; lamps; lard; marble; medicines; oilcloth; plants and trees (at owner's risk); rattans; salt, table; sandalwood; shaving instruments; silk waste; stoneware; tarpaulins; woodenware; and wool, loose.

"*B*," consisting of such articles as bedsteads, metal; biscuits, bread, and cakes; buttons; cigarette holders; cloth material (at railway risk); handkerchiefs; incense; leaf fans; leather boots; machinery in small lots; matting; merchandise such as thread, buttons, toys, umbrellas, vases, fans, mosquito nets, etc.; shirts; straw ware; tea; and toys.

"*C*," consisting of such articles as agricultural implements (not machinery); ale or beer (not bottled); brass; brooms and brushes; candied fruits; carriage fittings; cloth material (at owner's risk); coal tar; confectionery; cotton sweepings and waste; eatables, sweet, such as dates, sugars, candied fruits, etc. (at owner's risk); felt; hemp and hemp cloth (at owner's risk); rope; shells; towels; and vaseline.

"*D*," consisting of such articles as advertising frames; aerated waters; barrows; books and stationery; bottles, empty, in casks or hampers; brass and copper, scrap;

carpets; cement in barrels; charcoal; coir matting; colors; dyes; fish and poultry; fruits, fresh; hardware and ironware; honey; lead; leather goods; medicine (at owner's risk); milk, condensed; paints and varnishes; provisions; safes; scales; seeds; stoves; tiles; timber; tinfoil and tinware; wines and spirits; and zinc.

"*E*," consisting of such articles as bags, empty; calcium chloride; cigarettes, cigars, and tobacco; horns; hosiery; wool, pressed; and woolen yarn.

"*F*," consisting of such articles as bones and bristles (at owner's risk).

"*G*," consisting of such articles as alum; coke; cotton seeds; egg yolks; flour and other bagged goods; ginger, dried and fresh; hams and meat; hides and skins; kerosene (at owner's risk); lime; nuts (at owner's risk); paper; pepper; sesame seeds; snuffs; soda and ash; straw braid; sugar cane; and vegetables.

"*H*," not listed.

"*I*," consisting of such articles as candles; slate; and tallow.

"*J*," consisting of such articles as ashes or cinders; ballast; bamboo; bricks; building and construction materials; piece goods; railway materials; salt, common; sawdust, common; seaweed; soap; and stone.

The rates for each 133⅓ pounds (1 picul) per mile, for each of the foregoing classifications, are as follows: "X" class, ⅓ to 20 cents, Mex.; first class, ⅛ to ½ cent, Mex.; second class, ⅛ to ⅓ cent, Mex.; third class, 1/13 to ¼ cent, Mex.; third class, "A," ¼ cent, Mex.; "B," ⅕ cent, Mex.; "C," ⅙ cent, Mex.; "D," ⅐ cent, Mex.; "E," ⅛ cent, Mex.; "F," ⅑ cent, Mex.; "G," ⅒ cent, Mex.; "H," 1/11 cent, Mex.; "I," 1/12 cent, Mex.; "J," 1/13 cent, Mex.

The minimum charge for any consignment of freight is 50 cents, Mex.

Prices per ton and per carload lot, for any distance, will be quoted on application to the traffic manager; also prices for shipments of live stock.

Freights on the Shanghai-Hangchow-Ningpo Railway are divided into six general classes, as follows:

"*X*" *class*, consisting of explosives, etc., like the same class on the Shanghai-Nanking Railway.

First class, consisting of such articles as alabaster figures and ornaments; amber; animals and birds, stuffed; art pottery; artificial flowers; bicycles; bird-cages; bronze figures; chinaware; clocks and watches; coffins; crackers, native; crape; embroideries; engravings; fans, superior quality; feathers; wax figures and flowers; furs; glass, all kinds; gold and silver lace or thread; musical, technical, and scientific instruments; hats, straw; jade and jadestones; jewelry and trinkets; lace; lacquer ware; maps; medicines, native, first quality; motor cars; oil paintings; perfumes; silk goods; porcelains; ribbons; samples, traveler's; satin or velvet; straw ware, fine; tables, bagatelle and billiard; tortoise shell; vases, china; and writings.

Second class, consisting of such articles as aluminum; animals, live, in strong portable cases; baggage, personal; fancy woods; brass ware, fancy; caps and hats, imported; carpets, imported; chairs, basket or wicker; cocoa and coffee; copperware, fancy; cotton piece goods; deer sinews and horns; electric appliances and equipment; egg yolk in jars or bottles; engines; fancy goods, toys, etc.; fish and game; flowers; fruits, fresh; furniture; garments, woolen; goods, sporting; mats; hosiery; india-rubber goods; isinglass; lamp chimneys; flowers; machinery, in small lots; marble; matches, safety; medical wines and medicines; oilcloth; paper flowers; quicksilver; ribbons; rubber goods; safes; scales; sewing machines; shaving instruments; seals; snuff; sponges; straw, loose, and straw braid; toilet preparations; wines and spirits; and wool, loose.

Third class, consisting of such articles as advertising frames; aerated waters; ale or beer; arrowroot; bamboo ware, fine; barrows; bedsteads, metal; books and stationery; boots and shoes, imported; bottles, empty, packed; boxes and cases, empty; brass; buttons, imported; cane, sugar; candles; carriage fittings: chinaware, coarse; cigarettes, cigars, and tobacco; cigarette holders; coal tar; colors; confectionery; cork; cotton sweepings, waste, and yarn; crockery, common; dyes, colors, and paints; earthenware; eggs in boxes; felt; fish, salt and dried; fruits, dried; seeds; ginger; hardware; leather goods; hemp and hemp cloth; hides and skins; horns and articles made thereof; household linen and wearing apparel; ice; incense; iron, manufactured; kitchen utensils and stoves; lamps; lard; leather ware; milk, condensed; mulberry leaves, fresh; muslin; native cloth; nuts; oils; vegetables; ores; paints and varnishes; paper, common; petrolatum; plants and trees; provisions; railroad construction and equipment materials; rope; salt, table; seaweed; seeds; straw ware; tallow; tiles: timber; vaseline; zinc nails and zinc ware.

Fourth class, consisting of such articles as abacus; agricultural implements (not machinery); alum; ashes or cinders; bags, empty; baskets, common; barley, beans, and grains of all kinds; bean cake; bones; boots and shoes, native; brass, scrap; bread, cakes, and biscuits; bricks, fire; bristles (in boxes or hampers); cement; chalk; charcoal; coir mats and matting; cork; corrugated iron; firewood; flour; grass, turf; gypsum; grains, edible; iron and steel, manufactured; oil, kerosene; leather, scrap; lime; manure; meat, salted; mulberry leaves, dried; ores, common; pickles; soap, common; soda; stone, wrought; tea dust; tiles, ordinary; and zinc sheets.

Fifth class, consisting of such articles as ballast; bamboos; bricks, common; brooms and brushes, native; coal; mud and earth; paper ash; sand, in casks; and stone, rough.

The rates for each 133⅓ pounds (1 picul) per mile, for each of the foregoing classifications, are as follows: "X" class, 5 cents Mex.; first class, ½ cent Mex.; second class, ⅓ cent Mex.; third class, ¼ cent Mex.; fourth class, ⅙ cent Mex.; fifth class, 1/11 cent Mex. The minimum charge for a freight consignment is 50 cents Mex.

The following are the rates per ton, at railway risk, exclusive of terminal and other charges, the loading and unloading to be performed by the shipper and consignee:

Distance, in miles.	First class.	Second class.	Third class.	Fourth class.	Fifth class.
	$ Mex.	*$ Mex.*	*$ Mex.*	*$ Mex.*	*$ Mex.*
Under 15	1.65	1.10	0.75	0.60	0.40
16 to 23	2.25	1.45	1.00	.70	.45
24 to 32	2.85	1.75	1.20	.80	.50
33 to 42	3.45	2.20	1.45	.90	.60
43 to 54	4.05	2.65	1.65	1.05	.65
55 to 68	4.70	3.10	1.85	1.20	.70
69 to 84	5.30	3.50	2.20	1.40	.75
85 to 103	5.90	3.95	2.50	1.55	.80
104 to 125	6.60	4.40	2.75	1.75	.85
126 to 150	7.15	4.85	3.10	1.95	1.00

The rates per ton for "X"-class goods are not quoted.

Except as stated above, concerning the double-tracking of the Shanghai-Nanking Railway, the Shanghai consulate general knows of no railway construction under way or contemplated in this district.

TRAMWAYS.

The Shanghai Tramways, operating in the International Settlement of Shanghai, are owned by the Shanghai Electric Construction Co. (Ltd.), a British corporation having its head offices in London. The Shanghai general manager of this line is D. McColl. The capital is £320,000 (approximately $1,552,000 gold). This company now operates 9.385 miles of double track and 7.055 miles of single track, with 90 motored cars and 70 trailers. The same company also operates 1.007 miles of trackless motor service, with 7 railless motored cars. The latter service is operated on streets that are considered too narrow for the laying of tracks. The motive power for this line is furnished by the Municipal Electrical Works.

The first-class fare is 3 cents Mex. for a "section," the sections averaging about nine-tenths of a mile in length. The highest fare for a single trip, from one end of a route to another, is 12 cents Mex. The third-class fare (two classes of fare are provided) works out to about one-half the first-class fare. The third class is patronized almost exclusively by the Chinese. There are a very few shorter sections on which the first-class fare is only 2 cents Mex. and the third-class fare one-half that amount. A first-class monthly season ticket is sold for $6 Mex. and entitles the holder to make use of the cars at any time during the month in which the ticket is current. These tickets are extensively used by regular patrons of the lines. In 1917 the Shanghai Tramways carried 73,500,000 passengers.

The French Settlement in Shanghai has its own tramway system, owned and operated by the Compagnie Française de Tramways et d'Eclairage Electriques de Shanghai, having its head office in Paris. The Shanghai general manager is M. Coursier. The capital is 8,000,000 francs (approximately $1,440,000 gold). This company operates also the electrical undertaking and the waterworks system in the French Settlement. There are about 3.07 miles of double track and about 6.88 miles of single track. There are 38 motored cars and 12 trailers.

The fares on this line correspond to those on the lines in the International Settlement, except that it costs 15 cents Mex. for the longest single-route trip. A monthly season ticket good for use on both lines can be purchased for $10 Mex. These tickets are used by persons whose business takes them to all parts of the city.

There are at the present time no prospective extensions on either of the rail systems; but efforts are now being made to obtain authority from the municipal council to extend the railless system.

There is a very short tramway operated on the Bund of the Chinese city by a native concern, but statistics concerning it are not available.

ROADS.

As in nearly all other districts in China, there are no roads worthy of the name in the Shanghai consular district outside the towns and villages, and in the latter such roads as exist are usually nothing but beaten dust routes running through the principal streets—in fact, mere alleys or footpaths. Therefore, there can be said to be no particular trade routes traversed by ordinary roads. There are approximately 126 miles of road in the International and French Settlements of Shanghai, of which approximately 77½ miles are macadam and 21 miles paved. The unimproved roads are generally new streets on the borders of the settlements. No statistics are known to be available concerning the length of the roads in the native city, but it is probably safe to say that there are not as many roads in the native city as in the International and French Settlements. The roads in the native city are not as wide, nor as well kept, as the others.

The upkeep of the roads in the International and French Settlements is in charge of the municipal council of each settlement. In the International Settlement several streets are marked out for future improvement, and such improvements will be carried out as fast as funds therefor become available.

There are very few draft animals in use throughout the district. Occasionally oxen, carabou, and horses are seen in the rural districts. The principal methods of transportation from one town to another are by the rail and water routes. However, a considerable number of horses and carriages are still used in Shanghai for the transportation of pleasure seekers, and there are many privately owned horses and carriages there. The one-horse carriage can be hired for $1 Mex. an hour. There are a great many automobiles now in use in Shanghai, both privately owned and for hire, the charges for the latter being from $3 Mex. an hour, for the cars carrying three passengers besides the driver, to $5 Mex. an hour for the cars carrying six passengers besides the driver. But the principal means of passenger transportation in the city and suburbs are the street cars (which have already been fully described) and the jinrikishas (small two-wheeled vehicles drawn by coolies). The official rates for the latter are 10 cents Mex. per mile, or 50 cents Mex. an hour for the first hour and 40 cents Mex. an hour for each succeeding hour. Jinrikishas can also be hired by the day or month for $0.50 to $1 Mex. and $18 to $25 Mex., respectively, according to the nature of the work. The Chinese pay less than half these rates, as a rule.

Except in a very small proportion of cases, in which speed is more important than anything else and in which automobiles are used, the hauling of freight in the city is done by coolies, who have large two-wheeled carts, or trucks, on which they haul loads weighing from 1,000 to 4,000 pounds, according to bulk. The cost of these ranges from $0.50 to $0.80 Mex. an hour, or from $3 to $4 Mex. a day, according to nature and weight of loads. It should be stated, in connection with these prices for coolie hauling, that there are no extra charges for loading and unloading, as this is all done by the coolies who haul the loads.

In addition to the two-wheeled freight cars, a great many of the Chinese wheelbarrows are still used for transporting freight and passengers. These carry from four to six persons and loads from 300 to 750 pounds in weight, and they can be hired for from $0.20 Mex. an hour to $1.25 Mex. a day.

POSTAL FACILITIES.

Shanghai is very well served in the way of postal facilities with all parts of the world. In addition to the main Chinese post office, which is situated at the corner of Peking and Szechwan roads, there are several branches of the Chinese post office situated at convenient places throughout the city, and the American, British, French, German, Japanese, and Russian authorities have postal agencies in Shanghai. These latter are patronized very largely, by foreigners and natives alike, for sending mail to the various countries indicated and to their possessions. The rates charged by these various foreign agencies between China and their own dependencies (except in the case of Great Britain, which now charges the Postal Union rates) are practically their own domestic rates to the same parts. The Chinese local and domestic rates are about one-third less than the local and domestic rates in other countries for first-class mail matter. The Chinese post office handles most of the domestic mail and operates a free delivery system within the city. By arrangement with the British postal authorities, on account of the latter charging Postal Union rates, the Chinese postal authorities also make free delivery of British mail within the city. Free delivery of mail within the city is made by the other foreign postal agencies in Shanghai. There are splendid railway and water facilities for the distribution of mail throughout the Shanghai consular district.

The American post office is situated at 14 to 16 Whangpoo Road, next to the American consulate general; the British post office at the corner of Peking and Museum Roads near the main Chinese post office; the French post office at 61 Rue Montauban, in the French Settlement; the German post office (which has ceased to function since the declaration of war between China and Germany) on the corner of Foochow and Szechwan Roads; the Japanese post office at 1A Seward Road; and the Russian post office at the corner of North Soochow and Woosung Roads.

In addition to parcel-post and money-order arrangements, at international rates, between the Chinese and United States postal authorities to all parts of China and the United States, there are parcel-post and money-order facilities between the United States and Shanghai, through the American postal agency, at United States domestic rates. In the use of this service the United States eighth zone rates apply for parcels to Shanghai only, and goods may be insured and sent "collect on delivery."

Mail steamers ordinarily go and come between China and the United States direct from three to five times a month, and the time required for the receipt of first-class mail from New York is usually from 26 to 35 days, although it has been known to come in 20 days and sometimes takes 40 or 45 days.

TELEGRAPHS.

Shanghai is in very close telegraphic and cable communication with all parts of the world. The following telegraph and cable offices operate in Shanghai:

Chinese Telegraph Administration, No. 8 The Bund.
Eastern Extension, Australasia & China Telegraph Co. (Ltd.) (British), No 7 The Bund.
Great Northern Telegraph Co. (Ltd.) (Danish), No. 7 The Bund.
Commercial Pacific Cable Co. (American), No. 7 The Bund.

Wheatstone apparatus is in general use in the telegraph offices throughout this district.

The following rates are in force for telegrams in foreign languages: To all places in the same Province, 9 cents Mex. per word; to all other places in China, 18 cents Mex. per word. Press telegrams throughout China are sent at the rate of 6 cents Mex. per word. Telegrams in the Chinese language to all places in the same Province cost 6 cents Mex. per character; to all other places in China, 12 cents Mex. per character. Press messages throughout China in the Chinese language cost 3 cents Mex. per character.

The foreign telegraph and cable offices maintain practically the same tariff of rates, and press messages are accepted at half the usual rates. Deferred cablegrams to most countries in Europe are transmitted at one-half the usual rates. The following extract from the printed tariff of the Commercial Pacific Cable Co., dated April 1, 1917, will give a general idea of the rates per word prevailing at Shanghai for cablegrams to various parts of the world:

	$Mex.
Alaska, via Ashcroft	3.05
Yukon, Dawson City	2.40
Yukon, via Seattle	2.25
San Francisco, Alameda, Berkeley, Oakland, etc	1.75
(For other points in the United States, add the United States telegraph rate to the rate for San Francisco.)	
British Columbia:	
Eighth zone	2.55
Seventh zone	2.40
Sixth zone	2.20
Fifth to First zones, a sliding-scale reduction of $0.00325 per word for each zone.	
Prince Edward Island	2.10
Cape Breton	2.05
Saskatchewan	1.95
Mexico	2–2.30
Costa Rica	2.70
Guatemala:	
San Jose	2.60
Other places	2.70
British Honduras	2.70
Nicaragua:	
San Juan del Sur	2.60
All other places	2.70
Salvador:	
Libertad	2.60
All other places	2.70
South America, from $4.25 Mex. for Dutch Guiana to $2.80 Mex. for Panama.	
Great Britain, France, Belgium, and the Netherlands	2.40
Germany (via Sayville wireless)	2.75
Austria-Hungary (via Sayville wireless), Turkey, and nonbelligerent countries	2.90
West Indies, from $4.10 Mex. to as low as $2.10 Mex. for Habana, Cuba.	

So far as can be ascertained, no extensions of telegraph or cable service are contemplated at the present time.

TELEPHONES.

In Shanghai there are two separate systems of telephones in operation—one in the foreign settlements, owned by a British corporation, the stockholders of which are chiefly Shanghai residents of all nationalities; and the other in the Chinese city, under control of the Chinese Board of Communications, a Government bureau.

The Shanghai Mutual Telephone Co. (Ltd.), which operates in the International and French Concessions, has two zones of service, the first comprising all the territory within a radius of 2½ miles from the telephone exchange, and the second including all territory outside of the 2½-mile radius but within a 4-mile radius. The annual subscription rates, payable quarterly in advance, are: In the first zone, for business and private wall telephones, 65 and 45 taels, respectively; in the second zone, 100 and 60 taels for business and private wall telephones, respectively. If desk instruments are used, an additional charge of 10 taels per annum is made in the first zone and 20 taels per annum in the second zone. Subscribers who are stockholders holding at least four shares are entitled to a reduction of 20 per cent from the prices quoted. There are at present more than 5,600 subscribers to this telephone system. The system is Swedish, all the instruments having been imported from Stockholm.

In the Chinese city of Shanghai the Government offers service to both business and private houses at a flat rate of $4 Mex. per month.

There are also telephone systems in the towns of Changchow, Hangchow, Kashing, Kunshan, Ningpo, Shaoshin, Soochow, and Wenchow, in the Shanghai consular district.

No extension of the systems (aside from the regular increases in the number of subscribers) is contemplated at the present time.

NEWSPAPERS.

The leading foreign newspapers circulating in Shanghai are the China Press (American), the North China Daily News (British), the Shanghai Times, the Shanghai Mercury (British), and the Shanghai Gazette (Chinese-American). The leading native newspapers are the Shun Pao, the Hsin Wen Pao, and the Eastern Times. All these newspapers are daily publications.

The circulations of the Chinese newspapers average from 18,000 to 30,000 daily, and the Shun Pao is thought to be the most widely read paper in the Shanghai district. Its advertising rates are higher than those of any of the other Chinese publications. An advertisement on the front page of this paper, which is considered a very desirable place, ⅜ inch by 11 inches in size, costs $1.41 Mex. per day, and every additional line costs $0.53 Mex. per day for the first day; for the second and following days the charge is $0.66 Mex. for the first-named space and $0.44 Mex. for each additional line. The rates are lower on the other pages.

The Hsin Wen Pao charges (by contract only) $9.89 Mex. per day for a whole page, $5.14 Mex. for a half page, and $2.47 Mex. for a quarter page.

The Eastern Times charges $22.44 Mex. per day for a whole page advertisement and proportionately for one-half and one-quarter pages. Rates on the front page and the middle of any page are double the rates stated. A reduction of 10 per cent is allowed for advertisements running for three months, 20 per cent for six months, and 30 per cent for one year.

It is estimated that approximately 25 per cent of the native population are able to read.

PUBLIC WORKS AND SANITATION.

So far as can be ascertained, no irrigation or reclamation projects of any kind are now being carried out or contemplated in this district.

WHANGPOO RIVER CONSERVANCY.

The conservancy of the Whangpoo River, the main shipping artery from the ocean to Shanghai, is constantly being carried on. This is made necessary by the unceasing collection of silt, which is brought down from the upper reaches of the river, in the navigable channel. This work is in the hands of a board consisting of the commissioner for foreign affairs at Shanghai, the commissioner of customs, the harbor master, and six of the prominent business men of Shanghai, under a scheme evolved by the Shanghai Chamber of Commerce. Funds for this work are obtained by the imposition of taxes on all customs duties levied as well as on the value of goods exported or imported duty-free. The plan was put into operation in May, 1912, the income from this plan averaging about 500,000 taels per annum, and the board now has its own dredging plant in operation. The result of this work so far carried on is that the Astra Channel, which at the time of commencement of operations was only 18 feet deep, is now more than 24 feet deep and vessels of that draft can safely enter and navigate the river up to a place opposite the customs wharf at Shanghai.

CONDITION OF STREETS—LACK OF SEWER SYSTEM—FIRE PROTECTION.

The general condition of the principal streets in the foreign settlements of Shanghai is very good, and all the streets are well lighted by gas or electricity; 624 gas and 1,583 electric lamps were in use for street lighting in the International Settlement on December 31, 1916. The water supply is ample for regular consumption and fire protection, but the water is not considered safe for drinking purposes until it has been boiled.

There is no regular sewer system. In the houses and hotels equipped with modern sanitary appliances the sewage is carried into cesspools, but as a general rule the waste and garbage is gathered up by the sanitary employees of the municipalities and disposed of for filling and fertilizing purposes. Plans for sewage disposal are now under consideration. It has been recommended that a sewage-disposal plant be installed instead of discharging the waste into the river or using septic tanks.

The fire department is a volunteer one, of which the only paid officers are the chief officer, the engineer, and one clerical assistant. There is ample semimodern and modern fire equipment, and fire losses are not above the average in cities of similar size. Plenty of fire hydrants are to be found all over the Settlements.

For the care and upkeep of the streets, the international municipal council operates 61 water carts, 1 steam water wagon, 55 gulley and dust carts, 13 machine scrapers, 36 machine brushes, 76 work carts, 16 garbage carts, and 11 steam rollers.

While the municipal authorities in the native districts make a brave attempt to emulate the municipal administration of the foreign settlements, they are not able to keep their streets in as good condition as those in the foreign settlements, but the streets are generally fairly well lighted and are kept reasonably clean.

ELECTRIC AND GAS PLANTS.

The Municipal Electric Works, installed, operated, and controlled by the municipal council of the International Settlement, consists of two plants, one situated at Riverside and the other on Fearon Road. These plants work in conjunction with each other and have capacities of 14,000 kilowatts and 5,600 kilowatts, respectively. The charge for lighting service is 0.115 tael per unit and for heating service is 0.03 tael per unit. Charges for industrial purposes are generally lower than for heating purposes, and vary according to the quantity used by the manufacturing establishments.

The machinery and equipment used are approximately 82½ per cent British and the rest American. The engineer in chief and manager is a British subject.

The prospects for the future extension of these plants are very promising. Continuous extensions must be made as soon as conditions permit the purchase of electrical generating machinery and equipment at reasonable prices. During the year 1917 no heating connections have been made owing to the fact of there being insufficient current to fill the need. In spite of the war, new cotton and other manufacturing industries requiring electric power are being established and it is expected that there will be a continually increasing demand for electric power.

The electric plant in the French Settlement is owned by the French Tramway Co. Statistics concerning its capacity, etc., are not available to the American consulate general. The rates charged by this concern are higher than those charged by the authorities in the International Settlement. It is probable that all the machinery and equipment is of European (mostly French) manufacture. The same company runs the water-supply system for the French Settlement, which was formerly owned by the French municipal council. The correct name of the company is the Compagnie Française de Tramways et d'Éclairage Électriques de Shanghai.

The Shanghai Gas Co. (Ltd.) was incorporated in 1863. The works and offices of this company are situated at 5 Thibet Road. It is a British concern and most of its plant and equipment were imported from Great Britain. Its charge for gas for lighting and heating is $1.80 Mex. per thousand cubic feet. It is doubtful whether any extensions will be undertaken by this concern, because the demand for gas for lighting purposes is gradually declining in favor of electricity. The greatest demand for gas at the present time is for water-heating purposes in buildings equipped with hot and cold water washing and bathing facilities. It is understood that the present plant is considered amply sufficient to supply the demands that are likely to be made upon it for some time to come.

WATERWORKS.

The Shanghai Waterworks Co. (Ltd.), a British concern, was incorporated in 1880 with a capital of £327,000 ($1,592,490 United States currency). The capital is now £1,000,000 ($4,866,500). The management of this concern is entirely British, and it is probable that most of its machinery and equipment is British. The charge for water supply is usually 4 per cent of the amount paid for rent for residences, and special rates are charged for offices and manufacturing establishments. The rates charged are in accordance with an agreement with the municipal council of the International Settlement. The total quantity of water pumped from the Whangpoo River in 1917 was 5,208,000,000 gallons.

As already stated, the water system in the French Settlement is under the control of the French Electric Co. The native city and Chapei districts own their own systems, concerning which no statistics are available.

TREATY PORTS AND FOREIGN CONCESSIONS.

The treaty ports in the Shanghai consular district, besides Shanghai, are Hangchow, a city of approximately 595,000 inhabitants, on Hangchow Bay in Chekiang Province; Ningpo, a city of about 455,000 inhabitants, near the mouth of the Yankiang River in Chekiang Province; Soochow, a city of about 500,000 inhabitants, on the Grand Canal in Kiangsu Province; and Wenchow, a city of about 100,000 inhabitants, on the Wukiang River, in Chekiang Province. By treaties with China, foreigners are allowed to reside and carry on trade in all treaty ports. The methods of control and administration at these treaty ports are the same as at other treaty ports in China. Shanghai is the only treaty port in the district having American consular representation, and here, in normal times, are located the consular representatives of Austria-Hungary, Belgium, Brazil, Cuba, Denmark, France, Germany, Great Britain, the Netherlands, Italy, Japan, Norway, Portugal, Russia, Spain, Sweden, and the United States. At present, the consular representatives of Austria-Hungary and Germany have been withdrawn on account of the war between China and those two countries.

All foreign countries trading in this district enjoy exactly the same privileges as to trade. American trade has been expanding rapidly during the past three years and, in 1916, the United States led every other country in the amount of foreign business done.

FINANCE AND BANKING.

CURRENCY IN CIRCULATION.

The actual currency in circulation in Shanghai is the Mexican silver dollar. The Shanghai tael is, however, the unit of currency in transactions for both native and foreign merchants. The Shanghai tael is especially mentioned for transactions in this district because it is generally known among foreign business men in China that the value of the taels of the different Provinces (and in many instances even in different towns in the same Province) varies considerably.

The tael is not a coin but a weight, representing a Chinese ounce (liang) of silver of certain purity. Taels are circulated by the foreign bankers in notes, and by native banks in checks (known as "native orders" in local parlance). There are also the sycees—shoes of silver—which weigh approximately 1, 2, 5, 10, and 50 taels. These sycees are rarely seen in the foreign settlements but are used in the native city. Native banks use the silver bar (valued at approximately 1,000 taels) in their transactions with foreign banks.

For the payment of Chinese Maritime Customs duties, the Customs or Haikwan tael is used, which is simply an arbitrary standard of currency and not used in commercial circles. It is supposed to be a pure silver tael, and the equivalent is 1.114 Shanghai taels. Duties are actually paid in Mexican dollars or Shanghai taels. The Chinese dollar is also accepted, but at a slightly lower rate than the Mexican dollar.

There is also the Kuping tael. This is the Treasury tael in which all Government taxes and dues, other than customs duties, are paid. Theoretically it is uniform throughout the Republic. One hundred Haikwan or Customs taels are equal to approximately 111.4 Shanghai taels, 105.215 Tientsin taels, and 101.64 Kuping taels.

Various kinds of silver dollars are in circulation in Shanghai, but the one most commonly seen is the Mexican dollar. In Ningpo and Hangchow the old Spanish or Carolus dollar is most in favor; this, though lighter than the Mexican dollar, may be in such demand as to be worth from 10 to 40 cents more than the Mexican dollar. Hongkong and Straits dollars are also met with, but their values fluctuate constantly. Chinese dollars have been issued by various provincial mints, and have been the cause of the lowering of the value of the Mexican dollar as compared with taels. In former years the Mexican dollar was worth, on an average, 73½ tael cents, but within the last three years it has stood at 71 to 72 tael cents.

The 10 and 20 cent pieces constitute the small silver coinage and in theory represent one-tenth and one-fifth of a dollar, respectively. But, in making exchange at the money exchange shops, from $1.10 to $1.16 is given in small change (10 and 20 cent pieces and coppers) for one silver dollar.

The copper coin, theoretically worth one one-hundredth part of a dollar, is the next smaller unit in general circulation; this, in turn, is divided into 10 parts represented by small metal coins called cash. The copper coin, like other Chinese currency, is subject to fluctuation in value. A silver dollar will usually buy from 1,300 to 1,400 cash, or 130 to 140 copper coins. These copper cents, since they were put into circulation in place of the metal cash, have been the cause of disputes between native employers and employees owing to their fluctuating value. The cash that was very extensively used by the native Chinese some 20 years ago in making purchases is now rarely seen. The present cash has deteriorated in size considerably, being about one-third the weight of the original cash, which was in use before the advent of the copper coin.

CURRENCY REFORMS.

Attempts have been made from time to time to provide a uniform currency system, and by the Mackay (British) treaty of 1902, signed at Shanghai, the Chinese Government agreed to take the necessary steps to provide a national coinage that should be legal tender in the payment of duties, taxes, and other obligations throughout the country by British as well as Chinese subjects. Regulations were drawn up as late as January, 1914, and these regulations received the approval of the President and Cabinet.

In a statement issued by the Ministry of Finance in October, 1915, to the China Press, an American newspaper, the steps taken toward currency reform were outlined as follows:

> New silver coins of 1-dollar, ½-dollar, 20-cent, and 10-cent denominations are to be coined, and 5-cent coins of nickel. The old dollars and subsidiary coins will gradually be recalled and recoined into the new currency. The values of the old coins will be at the rate of 100 cents, 20 5-cent pieces, 10 10-cent pieces, 5 20-cent pieces, and 2 half-dollars to the dollar in practice as well as in theory, and heavy penalties are provided for refusal to accept the new coins at their face value.

Although it is understood that this new coinage has been placed in circulation in some parts of China, it has not yet become effective in the Shanghai district.

DIFFICULTIES IN FOREIGN COMMERCIAL TRANSACTIONS.

The commercial transactions are subject to fluctuations in the value of silver in relation to gold, which constitute a considerable handicap to the importer because he is unable accurately to estimate what will be the value in local currency of his orders from foreign countries for future deliveries, as prices in foreign countries are nearly always quoted in gold. At the time of placing orders for future deliveries it may be that gold can be purchased at the rate of 1¼ to 1, but when goods are delivered and payment has to be made therefor, it may be that the rate will have increased to 1⅜ or 1½ to one or even more. From this it will readily be seen that the importers are compelled, as a rule, to buy in advance certain amounts of gold currency at a rate arranged with the banks, to protect themselves against the fluctuations in the value of silver. This is done every day through the medium of exchange brokers.

FOREIGN AND CHINESE BANKS.

The foreign banks charge interest for loans on approved securities at the rate of 6 to 7 per cent per annum. Fixed deposits are accepted at interest rates averaging 4 to 5 per cent per annum, and current accounts usually bear interest at the rate of 2 per cent per annum on daily balances over certain agreed amounts. The interest rates on savings accounts run from 3½ to 4 per cent per annum, interest payable semiannually.

The foreign banks in Shanghai buy and receive for collection bills of exchange, and issue drafts, telegraphic transfers, and letters of credit payable in the principal cities throughout the world. They receive money on deposit and loan money on approved securities. In general the same kind of banking facilities are available to residents and traders in Shanghai as to residents and traders in the United States.

The Chinese banks do a loan business principally, and the interest charged ranges (theoretically) from 10 to 20 per cent per annum, but, as a matter of fact, the interest rate varies daily from $0.03 to $0.12 per $100 per day, depending on the state of the money market. The purely Chinese banks do not, as a rule, ask for security from their customers in making loans to them, but those with whom they deal must be merchants of proved commercial standing or must be persons who are very well known to the banks. They make it a strict rule, however, that all accounts must be settled once a year, and any borrower failing to make settlement before the beginning of each year (Chinese New Year) "loses face"; that is to say, he loses his reputation as a merchant or person of standing and will experience much difficulty in obtaining future loans.

Mortgages on property are sometimes accepted, and interest rates are about 10 per cent per annum. Fixed deposits are accepted from the public at an interest rate ranging from 5 to 6 per cent per annum, and current deposits bear interest at an average of $2\frac{4}{10}$ per cent per annum.

Drafts are issued by such banks as have branches in China, but no foreign business is handled. Checks or orders issued by Chinese banks of well-known reputation are accepted by the foreign banks when paid in by their customers.

Besides the banks operated in the old way, there have been established several Chinese banks run with semiforeign methods, and a few of them have a foreign and a Chinese manager, but, with one or two exceptions, they do not handle transactions with foreign countries. These banks, as well as the foreign banks, issue paper notes that are used in place of coin for local transactions. Such paper notes, if drawn on banks of recognized standing, are also accepted in other cities of the Republic, but usually at discounts ranging from 1 to 15 per cent.

Shanghai has five American banking institutions—the International Banking Corporation, No. 1-a Kiukiang Road; the American-Oriental Banking Corporation (with which is associated the Raven Trust Co.), No. 15 Nanking Road; the Philippine National Bank, McBain Building, No. 1 The Bund; the Asia Banking Corporation, Kiangse Road; and the Park-Union Foreign Banking Corporation. The Asia Banking Corporation opened for business on February 7, 1919. Complete banking facilities are afforded the public at the office of the American Express Co.

The following are the foreign banks in Shanghai other than American:

Bank of Taiwan (Japanese), No. 16 The Bund.
Banque-Belge pour l'Etranger (Belgian), No. 20 The Bund.
Banque de l'Indo-Chine (French), No. 29 The Bund.
Banque Industrielle de Chine (Franco-Chinese), No. 1 Quai de France, French Bund.
Chartered Bank of India, Australia & China (British), No. 18 The Bund.
Hongkong & Shanghai Banking Corporation (British), No. 12 The Bund.
Mercantile Bank of India (British), No. 7 Nanking Road.
Nederlands Trading Society (Dutch), No. 21 The Bund.
Russo-Asiatic Bank (Russian), No. 15 The Bund.
Sumitomo Bank (Japanese), No. 1 Kiukiang Road.
Yokohama Specie Bank (Japanese), No. 31 The Bund.

Among the principal Chinese banks operating under semiforeign methods are:

Bank of China (semigovernmental), No. 3 Hankow Road.
Bank of Communications (governmental), No. 35 Szechwan Road.
Commercial Bank of China, No. 6 The Bund.
Ningpo Commercial Bank, No. 8 Ningpo Road.
Kiangsu Bank, No. 51 Kiangse Road.
Chakiang Industrial Bank, 39 Peking Road.
Shanghai Commercial & Savings Bank, 9 Ningpo Road.

In October, 1918, the Shanghai Bankers' Association (Chinese) was formed. The association owns its own home, on Hongkong Road.

MANUFACTURING AND OTHER INDUSTRIES.

Shanghai industrial activities include cotton mills (which form to-day the most important industry of Shanghai), silk filatures, flour mills, oil mills, paper mills, shipbuilding works and docks, tobacco and cigarette factories, soap and candle works, match factories, egg factories and refrigeration plants, a brewery, a canning factory, a tannery, a piano factory, and several printing works.

The local mills generally procure and market their products in China. Cotton-mill and flour-mill products especially have made great strides during the last few years. The products of the silk filatures and oil mills find a continually expanding market in America, Japan, and Europe. Most of the industrial products of Shanghai find a ready market in China, and cotton goods, in particular, are already competing with the imported article and, with the close of the war, there are likely to be further developments in this industry.

In almost every industry the natives are closely following foreign methods and Chinese are replacing foreigners. The flour mills are nearly all operated by Chinese, except one that is operated and managed by Japanese. The Chinese also own the largest printing works in Shanghai. The following are the principal foreign owned and controlled industries in Shanghai:

Union Brauerei (brewery), 40 Gordon Road (German).
A. Butler Cement Tile Works (Ltd.), Soochow Creek, Ferry Road (British).
Kiangsu Chemical Works, Soochow Creek, near Ferry Road (British).
British Cigarette Co. (Ltd.), Pootung, town office 22 Museum Road (associated with the British-American Tobacco Co.).
China Cork Factory, 53 Szechwan Road (Belgian).
Oriental Cork Factory, 128 Szechwan Road (Italian).
Ewo Cotton Spinning & Weaving Co. (Ltd.), 46 Yangtzepoo Road (British), with a capital of 1,500,000 taels and with 73,952 spindles and 679 looms.
International Cotton Manufacturing Co. (Ltd.), Pootung (British), town office 4 Kiukiang Road, with a capital of 778,800 taels and with 53,200 spindles and 500 looms.
Oriental Cotton Manufacturing Co. (Ltd.), 36 Yangtzepoo Road (British), with a capital of 1,000,000 taels and with 50,768 spindles.
Kung Yik Cotton Spinning & Weaving Co. (Ltd.), Robinson Road (British), with a capital of 750,000 taels and with 25,376 spindles and 500 looms.
Laou Kung Mow Spinning & Weaving Co. (Ltd.), 40 Yangtzepoo Road (British), with a capital of 800,000 taels and with 40,096 spindles.
Nagai Wata Kaisha, Ichang Road, two cotton mills (Japanese), with a capital of $2,500,000 and with 120,000 spindles.
Shanghai Cotton Manufacturing Co. (Ltd.), Yangtzepoo Road, two mills (British but under Japanese management), with 46,000 spindles and 886 looms.
Yangtzepoo Cotton Mill Co., Wetmore Road (British), with a capital of 1,500,000 taels and with 55,632 spindles and 416 looms.
New Shipbuilding & Engineering Works (Ltd.), 37 Yangtzepoo Road (British), with an authorized capital stock of 750,000 taels.
Shanghai Dock & Engineering Co. (Ltd.), 26 Broadway (British), with a paid-up capital stock of 5,520,000 taels.
Egg factories (all American):
  Amos Bird Co., 91 Yangtzepoo Road.
  American Egg Drying Co. (Inc.), 820 N. Chekiang Road.
  Superior Egg Products Corporation, 1512 W. Saw Gin Creek Road.
China Flour Mill Co. (Mitsui Bussan Kaisha, owners), with a capacity of 2,000 bags of flour and 18 tons of bran daily.
Shanghai Ice & Cold Storage Co., 69 Yangtzepoo Road (British).
Lih Teh Oil Mill Co. (Ltd.), Soochow Creek, Chapei, with a capital of 260,000 taels and with a capacity of 6,075 tons of cotton seed and 1,215 tons of oil per annum; this mill also sells linseed oil.
Shanghai Paper Mill, Pootung, town office 9 Siking Road (Japanese), with three sets of machines.
China Import & Export Lumber Co. (Ltd.), 80 Yangtzepoo Road (British).
Ewo Silk Filature, 14 Chengtu Road (British).
Soap and candle works:
  William Katz & Co., 93 Avenue Road (American).
  Gustav Boehm, 6 Sicawei Road (German).

The principal industries owned and controlled by Chinese are:

Tai Foong Canned Goods Co. (Ltd.), Ferry Road, with a paid-up capital of $132,300 Mexican.
Cigar factory: Tabaquería Filipina, North Honan Road Extension.
Cigarette factory: Nanyang Bros. Tobacco Co., corner Dent Road and Broadway.
Cotton mills:
  Anglo-Chinese Cotton Manufacturing Co., 4 Lay Road, with 11,648 spindles.
  Heng Chan Yuen, 2 Ichang Road, with a capital of 250,000 taels and with 9,392 spindles.
  Heng Foong Cotton Manufacturing Co. (Ltd.), 1 Whashing Road, with a capital of 500,000 taels and with 15,576 spindles and 400 looms.
  San Sing Cotton Manufacturing Co. (Ltd.), 87 Yangtzepoo Road, with an authorized capital of 2,100,000 taels and with 65,520 spindles and 506 looms.

Cotton mills—Continued.

- Teh Dah, 1 Lay Road, with an authorized capital of 200,000 taels and with 11,100 spindles.
- Tung Chang, 22 Ki-chang Road, with a capital of 300,000 taels and with 11,300 spindles.
- Yu Tung, 1091 Cha-tai-ko, near Markham Road, with a capital of 500,000 taels and with 18,000 spindles and 300 looms.
- Yu Yuen, 60 Markham Road, with 26,936 spindles.

Docks and shipbuilding works:

- Kiangnan Dock and Engineering Works, Kao-chang-miao, south of city (under foreign management).
- Nicholas Tsu Engineering and Shipbuilding Works, Avenue Benzaure, south of Chinese Bund (entirely under native management).

Flour mills:

- Chung Hsung, Soochow Road, with a capital of 160,000 taels and with a daily capacity of 1,600 bags of flour and 13 tons of bran.
- Fu Foong, 1 Markham Road, with a capital of 350,000 taels and with a daily capacity of 1,600 bags of flour and 35 tons of bran.
- Fu Hsin Ti Erh Chang, Mokanshan Road, with a capital of 300,000 taels and with a daily capacity of 3,200 bags of flour and 10 tons of bran.
- Hua Feng, 58 Markham Road, with a capital of 200,000 taels and with a daily capacity of 600 bags of flour and 8 tons of bran.
- Hua Hsing, 53 North Soochow Road, with a capital of 260,000 taels and with a daily capacity of 4,800 bags of flour and 30 tons of bran.
- Li Ta, 31 Jessfield Road, with a daily capacity of 2,000 bags of flour and 15 tons of bran.
- Shen Ta, 71 Ki-chang Road, with a capital of 150,000 taels and with a daily capacity of 1,600 bags of flour and 13 tons of bran.

Match factories:

- Hsieh Chang, 4 Tongshan Road.
- Yung Chang, Lanidu, Pootung.

Oil mills:

- Heng Yu, Jessfield Road, with an annual capacity of 3,900 tons of cottonseed cake and 1,170 tons of cottonseed oil.
- Hsin Chang, Pootung, with an annual capacity of 6,075 tons of cottonseed cake and 1,215 tons of cottonseed oil.
- Tah Teh, 86 Yangtzepoo Road, with an annual capacity of 3,240 tons of cottonseed cake and 648 tons of cottonseed oil.
- Tah Yuh, 1 Ichang Road, with an annual capacity of 4,050 tons of cottonseed cake and 810 tons of cottonseed oil.
- Tung Chang, 73 Kichang Road, with an annual capacity of 6,075 tons of cottonseed cake and 810 tons of cottonseed oil.

Paper mill: China Paper Mill, 5 Loongwha Road, with a capital of 460,000 taels and with two sets of machines.

Silk spinning and weaving mills:

- Shanghai Silk Spinning Co. (Ltd.), 28 Jessfield Road, with a capital of 400,000 taels and with 5,100 spindles.
- Shanghai Silk Weaving Mill, 371 Arthur Road.

Tannery: Lung Hua Tannery Co., Tsao-Kia-doo, with a capital of 800,000 taels.

The Ho Hsin Smelting Works, a new plant at Pootung, has begun operations and aims to become one of the leading steel works in China.

A new mill for the manufacture of fine thread is to be established in Shanghai, with a capital of $1,600,000.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The following table gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Shanghai during the years 1904, 1913, and 1918:

Imports and exports.	1904	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$128,717,118	$181,261,470	$256,456,713
From Chinese ports	1,240,840	1,554,970	7,077,049
Total foreign imports	129,957,958	182,816,440	263,533,762
Reexports of foreign goods:			
To foreign countries and Hongkong	5,945,684	8,346,695	14,973,052
To Chinese ports	94,122,129	101,381,955	143,118,374
Total foreign reexports	100,067,813	109,728,650	158,091,426
Net total foreign imports	29,890,145	73,087,790	105,442,336
Imports of Chinese products	84,460,746	150,538,547	275,708,092
Reexports of Chinese products:			
To foreign countries and Hongkong	52,056,179	100,203,268	152,769,577
To Chinese ports	19,201,507	32,028,895	50,732,383
Total Chinese reexports	71,257,686	132,232,163	203,501,960
Net total Chinese imports	13,203,060	18,306,384	72,206,132
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	33,786,589	30,937,246	87,370,399
To Chinese ports	19,137,118	31,323,879	121,511,345
Total exports of local origin	52,923,707	62,261,125	208,881,744
Gross value of the trade of the port	261,342,411	395,616,112	748,123,598
Net value of the trade of the port	96,016,912	153,655,299	386,530,212

The following table shows, by countries, the value of the foreign trade of Shanghai in 1918:

Countries.	Imports.	Exports.	Total.
British India	$5,759,851	$4,979,037	$10,738,888
Canada	9,270,403	4,831,590	14,101,993
Dutch Indies	6,162,903	1,248,292	7,411,195
France	1,611,878	35,999,322	37,611,200
Great Britain	55,012,326	26,756,753	81,769,079
Hongkong	26,126,113	18,977,066	45,103,179
Italy	408,742	11,494,047	11,902,789
Japan	98,959,679	65,952,948	164,912,627
Russia	931,462	4,105,272	5,036,734
Singapore, Straits Settlements, etc.	7,869,764	2,948,638	10,818,402
United States	40,150,094	56,995,460	97,145,554
All other countries	4,193,498	5,851,551	10,045,049
Total	256,456,713	40,139,976	496,596,689

EXPORT TRADE.

From the above tables it will be seen that Shanghai is maintaining its reputation of being the chief transshipping or distributing port of China for goods sent to foreign countries.

The facts that contribute to Shanghai's position in the development of the export trade are that practically all shipping lines of any consequence from foreign ports make Shanghai their port of call, that the banking facilities are the best available in the Far East, and that the principal business houses maintain head offices at that port. Power-press packing plants established there care for the repacking of raw products that come from the interior, and this is one of the conveniences that Shanghai exporters enjoy. Such plants have long been established, and the operators thoroughly understand the packing required to meet the rough handling to which goods going to Europe and America are subjected. The Shanghai-Nanking Railway and the Shanghai-Hangchow-Ningpo Railway are also important factors in the development of export trade from Shanghai, traversing as they do some very rich agricultural districts.

In every sense, therefore, Shanghai is preeminently the best port at which to conduct the export trade from China. The only recent handicap to the further extension of the export trade from this port may be said to have been the lack of boats, but this condition has existed all over the world and can not be said to apply to this port alone. This shortage of space has made shipping rates almost prohibitive for some classes of articles.

The following table shows the value of the chief items of export (including reexports) from Shanghai for the years 1904, 1913, 1915, and 1918:

Articles.	1904	1913	1915	1918
Beans:				
Black	$118,553	$175,630	$250,122	$362,090
Broad		1,825,471	508,858	1,093,388
Green	454,401	1,231,089	642,103	620,751
Yellow	3,478,045	2,921,806	1,542,138	2,129,644
Breadstuffs: Flour, mill	1,312,966	3,857,236	6,456,526	21,861,706
Bristles	1,405,678	2,616,770	2,488,415	5,362,432
Cotton and manufactures:				
Cotton, raw	17,238,520	10,354,009	6,526,691	35,049,631
Nankeens		3,482,543	3,107,369	5,533,600
Sheetings	262,597	1,251,870	1,692,330	10,496,902
Yarn	2,738,195	10,691,146	13,465,055	59,826,194
Egg albumen and yolk	259,969	1,708,587	2,704,315	8,344,764
Fiber, ramie		1,925,104	1,600,922	4,492,055
Peanuts	400,954	3,008,737	5,172,745	5,746,254
Hides:				
Buffalo	488,339	912,508	382,381	786,991
Cow	3,647,330	7,224,360	7,125,235	10,591,842
Metals: Antimony, regulus and crude	198,271	433,292	2,675,297	2,520,311
Oils:				
Cottonseed	1,916	415,168	527,764	1,107,520
Peanut	1,106,197	2,086,370	1,696,873	2,892,567
Seed:				
Rape		1,263,296	1,819,199	2,230,163
Sesame	1,289,226	7,398,590	5,317,880	1,402,729
Silk, and manufactures of:				
Raw—				
Yellow	2,226,372	3,929,846	4,027,860	6,941,802
White	6,162,274	23,086,180	22,212,661	85,939,979
Wild	5,645,554	4,326,068	2,962,568	6,156,183
Cocoons	364,622	1,325,767	1,423,555	2,788,598
Waste and cocoon refuse	901,501	3,158,858	3,032,666	8,517,218
Piece goods	6,589,642	6,544,491	5,022,868	(a)
Skins, goat, untanned	2,314,837	2,985,892	2,131,388	5,870,731
Straw braid	2,416,948	1,223,939	1,396,382	2,281,682
Tallow:				
Animal	122,369	462,259	407,260	1,214,785
Vegetable	612,952	1,300,191	1,179,397	2,584,656
Tea:				
Green	6,336,746	8,324,151	9,787,029	9,280,596
Black	1,028,990	2,747,617	6,824,233	3,675,682
Wool:				
Camel's hair	300,326	541,470	543,652	(a)
Sheep's	2,587,479	3,748,503	5,282,900	5,981,170
All other articles	52,169,624	66,004,384	54,427,361	138,497,088
Total	124,181,393	194,493,288	186,363,998	412,383,704

a Figures not available.

The following table shows, by quantity and value, the articles declared at the Shanghai consulate general for exportation to the United States and its possessions during the calendar years 1917 and 1918.

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO UNITED STATES.				
Antimony:				
Crude...pounds..	448,018	$38,192	446,880	$26,202
Regulus...do....	1,627,224	250,792	9,960,523	1,059,767
Oxide...do....			152,000	10,843
Art, works of:				
Antique porcelain		155,391		32,696
Embroideries		11,751		110
Horn, amber, jade, and other ornaments		64,645		36,674
All other		54,189		16,956
Bristles...pounds..	526,562	432,178	714,550	832,677
Chemicals:				
Albumen...do....	3,686,479	2,635,649	1,204,438	629,822
Camphor...do....	191,455	105,634	365,229	233,037
Gallnuts...do....	931,895	192,562	897,209	280,252
Musk...ounces..	10,392	147,214	5,629	98,528
Rhubarb...pounds..	276,470	54,816	38,694	15,973
Copper slabs...do....	448,000	120,950		
Cotton:				
Raw...do....	6,761,227	1,609,477	2,401,483	764,496
Waste...do....	1,137,365	99,171	21,408	3,370
Laces and embroideries		563,888		370,684
Earthenware: Chinaware		113,025		14,132
Eggs:				
Fresh...dozen..	229,830	48,078	404,640	133,175
Dried...pounds..	2,312,487	434,238	434,171	143,012
Frozen...do....	1,787,464	235,0[illegible]6	2,301,265	419,117
Yolks, dry...do....	5,381,192	1,599,266	137,151	80,442
Feathers and downs...do....	3,490,101	763,905	2,050,276	624,244
Fibers:				
China grass...tons..	174	58,473	1,307	458,318
Hemp...do....	294	84,927	62	21,208
Ramie...do....			557	198,026
Vegetable...do....	426	113,763	5	1,763
Fiber hemp braid				12,254
Fruits and nuts:				
Peanuts—				
Shelled...pounds..	537,791	33,204	252,000	26,402
Unshelled...do....	1,215,688	59,867	571,050	51,054
Walnuts—				
Shelled...do....	144,549	18,292	79,890	21,294
Unshelled...do....	258,530	20,335	50,000	6,250
Furs:				
Dressed—				
Dog mats		87,739		61,404
Undressed—				
Cat		11,626		9,183
Deer and doe		559,073		352,040
Goat		6,873,503		5,212,629
Marmot		24,365		33,863
Rabbit		12,048		7,663
Raccoon		1,893		59,201
Sable				18,584
Sheep and lamb		143,646		67,256
Squirrel		1,893		40,700
Tiger		9,883		
Weasel		78,314		125,058
Grease and oils:				
Animal tallow...pounds..	75,601	13,004	1,243,957	198,594
Vegetable tallow...do....	1,203,325	191,908	2,392,524	404,371
Hair:				
Horse, including combings...do....	48,725	7,492	7,981	1,293
Human—				
Cleaned...do....	163,215	57,413	38,036	16,015
Combings, including waste...do....	463,457	147,771	170,388	63,352
Stumps...do....			88,557	32,614
Hair nets		241,104		221,074
Hats, rush, straw, and woodshaving		288,046		31,442
Hides:				
Buffalo—				
Dry...pieces...	37,182	436,623	10,308	119,161
pounds..	1,433,448		567,252	
Salted...pieces...	159	1,691		
pounds..	12,259			
Cow—				
Dry...pieces...	317,107	1,735,380	202,730	755,776
pounds..	3,811,149		2,064,229	
Salted...pieces...	80,658	966,395	23,857	197,962
pounds..	6,649,792		621,426	
Donkey...pieces...			4,624	13,120
pounds..			31,777	
Horse and pony...pieces...	1,448	2,405	791	4,414
pounds..	9,694		12,873	

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO UNITED STATES—continued.				
Household and personal effects		$17,628		$18,147
Iron, pig ... tons	3,492	65,473		
Meat and dairy products:				
Hog casings		466,606		367,771
Lard ... pounds			35,000	7,716
Metals:				
Tungsten ore ... tons	5	4,492	339	349,373
Concentrates (tungsten) ... do			227	198,508
Wolframite ore ... do			143	160,577
Oils, vegetable:				
Bean ... pounds	183,591	27,286	375,000	48,082
Castor ... gallons	79,280	125,892	552,817	103,481
Cottonseed ... pounds	7,387,423	758,524	16,160,603	2,199,807
Peanut ... gallons	836,728	853,638	1,402,596	1,785,640
Rape ... pounds	779,685	103,861	717,362	101,440
Sesame ... do	4,611	767	230,713	40,545
Wood ... gallons	177,255	65,666	643,141	1,081,809
Paper:				
Books		14,663		9,574
Calendars		12,434		
Platinum ... ounces		492	120	13,038
Seeds, sesame ... pounds	79,400	7,878	963,520	84,017
Silk and manufactures:				
Cocoons ... do	113,682	114,206	25,776	28,238
Pongees		1,204,371		221,546
Raw ... pounds	3,143,059	17,689,891	2,478,574	13,902,312
Waste ... do	1,486,138	1,132,050	4,854,182	3,889,652
Wild ... do	981,775	3,010,003	1,004,298	2,950,522
Yarn ... do			39,140	175,922
Stones, semiprecious		30,616		10,308
Soapstone ornaments		10,389		525
Straw braid		136,705		227,990
Tea ... pounds	17,748,847	4,567,748	10,112,053	3,186,860
Tea sweepings ... do	300,500	41,274	130,380	32,640
Tobacco leaf ... do	6,125,444	1,292,816	2,319,840	763,840
Vegetables: Peas ... bushels	146,003	315,614	2,226	9,462
Wax: Paraffin ... pounds			448,000	69,810
Wool: Sheep ... do	8,761,397	2,730,224	3,063,538	1,026,019
Wool carpets ... square feet	64,354	50,024	777	822
All other articles		333,519		132,988
Total		57,196,933		47,868,519
TO PHILIPPINE ISLANDS.				
Breadstuffs:				
Flour, Chinese ... barrels[a]	102	603	12,095	125,657
Canned biscuits ... pounds			29,466	8,437
Vermicelli ... do			98,371	12,949
Oats ... tons			144	11,775
Candles		3,106		3,237
Coke ... tons			50	2,331
Cotton manufactures:				
Cloth		67,503		46,707
Laces		12,608		4,686
Nankeens ... pounds	82,150	27,262	126,371	51,422
Piece goods		4,387		6,108
Yarn ... pounds			201,398	85,323
Eggs, fresh ... dozen			4,500	1,002
Electrical fittings				1,652
Fruits, canned				2,464
Household and personal effects		2,164		1,434
Ink, printing ... pounds			1,228	983
Iron and steel, and manufactures of		3,584		11,714
Meat and dairy products:				
Canned meats		5,068		24,508
Hams ... pounds	514,763	180,664	594,423	209,823
Lard ... do			238,214	57,697
Milk, sterilized ... do	7,685	658	8,800	1,283
Musical instruments: Pianos				15,913
Nuts: Peanuts—				
Shelled ... pounds			114,305	6,016
Unshelled ... do			115,573	6,085
Oils:				
Lubricating ... gallons	1,000	808	9,322	7,025
Liquid fuel ... tons	500	10,712		
Peanut ... gallons	1,628	1,626	6,525	5,226
Paper:				
Books		862		1,265
Cigarette ... pounds	3,600	752		

[a] Barrel equals 196 pounds.

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO PHILIPPINE ISLANDS--continued.				
Photographic goods: Motion-picture films..linear feet..	35,545	$3,198	24,410	$965
Silk, and manufactures of:				
Piece goods	....	19,380	....	29,077
Pongees	....	4,983	....	1,167
Raw...pounds..	17,375	72,891	17,631	68,824
Stones, precious: Diamonds	....	....	....	3,500
Straw braid	....	329	....	2,663
Varnish, printing...gallons..	....	....	429	1,262
Vegetables:				
Beans...pounds..	....	....	522,205	17,622
Garlic...do...	....	....	129,063	4,198
Wax	....	1,475	....	....
All other articles	....	22,934	....	27,481
Total	....	447,557	....	869,781
TO HAWAII.				
Cotton laces	....	149	....	663
Earthenware: Chinaware	....	1,427	....	442
Eggs, fresh	....	504	....	23,883
Iron, pig...tons..	125	6,049	....	....
Meat and dairy products:				
Canned meats	....	5,769	....	1,391
Ham...pounds..	1,517	381	....	....
Oil, peanut...do....	25,920	3,076	15,480	4,612
Paper: Books, printed	....	....	....	1,333
Tea...pounds..	2,000	377	....	....
All other articles	....	140	....	711
Total	....	17,872	....	33,035

Exports from Shanghai to the United States during the first six months of 1919 were valued at $33,678,791.

In order to afford a basis of comparison with prewar conditions, the following table is given, showing the value of the declared exports from Shanghai to the United States and its possessions during 1913, the last normal year before the outbreak of hostilities:

Articles.	Value, 1913.
TO UNITED STATES.	
Antimony regulus	$6,763
Beeswax	9,314
Brass ornaments	2,574
Breadstuffs	6,298
Bristles	81,511
Chemicals	534,690
Cotton	28,042
Earthenware: Chinaware	12,072
Eggs	32,257
Feathers	57,057
Fibers	3,099
Fruits and nuts	84,588
Furs:	
Dressed	28,636
Undressed	1,293,452
Grease and oils	7,253
Hair	57,540
Hats	15,396
Hides	599,037
Household and personal effects	24,069
Meat and dairy products	15,294
Millet seed	$2,350
Oils, vegetable	409,054
Oil cake, cotton seed	1,727
Paper	7,321
Photographic goods (films)	2,963
Seed	5,202
Silk	9,904,814
Silk, manufactures of	20,192
Stones, manufactures of (soapstone ornaments)	618
Straw and grass	102,098
Tea	2,401,131
Tin	5,288
Vegetables	8,218
Vegetables, prepared or preserved (bean cake)	16,798
Wood, and manufactures of	2,071
Wool	1,614,291
Wool carpets and rugs	4,178
All other articles	33,084
Total	17,440,335
TO PHILIPPINE ISLANDS.	
Candles	$4,769
Cotton, manufactures of	9,561
Iron and steel, manufactures of	5,873
Meat and dairy products	1,493
Photographic goods (motion-picture films)	83
Silk, raw	16,773
All other articles	3,088
Total	41,640
TO HAWAII.	
Iron, pig	2,394
Paper, manufactures of	583
Tea	148
All other articles	242
Total	3,367

Shanghai is practically the sole outlet for silks from North China, although Chefoo has become important in tussahs. The white silk exported from Shanghai is produced in Kiangsu, Chekiang, and the Yangtze Valley Provinces; Wusih, in Kiangsu, produces the finest white silk in the world. Shaoshing, in Chekiang, is a close competitor. Yellow silk comes chiefly from Shantung, Honan, Hupeh, and Szechwan Provinces. Wild silk comes principally from Manchuria and Shantung Provinces. The new crops from the north reach the Shanghai market in May and June, and the new crop of wild silk in October. The trade year begins June 1 of one year and ends May 31 of the next.

While Shanghai produces no tea, it handled in a recent year, by reason of its central position, 153,198,267 pounds of tea, valued at $23,203,140 gold. Most of this tea came originally from Hankow, Kiukiang, Hangchow, and Ningpo. Tea begins to arrive in Shanghai early in June or sometimes in May, and arrivals continue until December.

Cotton seed is sown in May, or as soon as the wheat crops are cleared. The picking months are August to October. Wheat and rice grown in this district are mostly consumed in the district, the latter by the native population as their chief article of food, and the former by the flouring mills in Shanghai. The other products mentioned in the list of exports come chiefly from other ports and are dealt with in detail by consular officers in the districts from which they come. Reference to other products grown in this district will be found under the heading "Agriculture" (p. 251).

The imports at Shanghai of Chinese products from native ports increased more than threefold between 1904 and 1918, demonstrating that, while certain ports are trying to import their foreign goods direct, exportations to foreign countries are still made through Shanghai because of its favorable location and facilities. While a considerable portion of such imports remains at Shanghai, it is probable that the largest percentage is held for transshipment, awaiting a favorable opportunity for shipment elsewhere.

IMPORT TRADE.

LINES THAT SHOULD INTEREST AMERICAN MANUFACTURERS.

Of imports from foreign countries, brass and iron bedsteads ought to be of interest to American manufacturers; these have come principally from Great Britain heretofore, but during the past few years American bedsteads have been largely advertised by the leading retail stores. Machine belting has also been supplied chiefly by Great Britain, but the imports from the United States have shown very great increases. In butter, at the present time, the United States stands a fair chance, owing to the difficulty of procuring it from Australia and Russia. Stearine for the manufacture of candles is also an item that was previously imported chiefly from Great Britain, but the largest quantity is now coming from the United States; it is doubtful, however, whether this trade can be retained, unless prices and quality are able to compete with the British product, because the largest manufacturing concern is owned by the British. Canned fruits are generally imported from America and are holding their own. In canned milk the American product has always held the premier place in this market, though the British product has been boomed a great deal during the last few years. In chocolates the American product is gaining a little, though Great Britain still sends out the most; one large importer of these goods has stated that the American chocolate candies are too large for this market—they should be made about one-half the present sizes.

In coffee the United States has always led, but importations are coming in from the Dutch East Indies in increasing quantities. These latter are chiefly from plantations owned by Shanghai rubber companies. However, American coffee is considered the best.

In cotton, India heads the list, with American importations next. The importation of this item depends entirely upon the state of the local crop. In 1915 the imports increased considerably on account of short crops, the local mills having to import large quantities from abroad.

In manufactured cotton goods, Shanghai's most important articles of import, there is no doubt that the sale of American products has decreased considerably. While Japan has, no doubt, been a keen competitor in American lines of cotton goods during the past decade, and especially during recent years, the following quotation from Trade Commissioner R. M. Odell's report on the subject covers the position quite thoroughly:

> American cotton goods reach China through export houses in New York with branches in China. Most of these are American firms, but a few large English firms and one Japanese firm with New York offices handle some of the business. The number of firms engaged in the trade is not nearly so large as formerly, owing to the rapid decline in the sales of American cotton goods and the losses that many firms suffered following the boom days of 1905 and 1906, during and immediately after the Russo-Japanese War. The export houses in New York purchase goods from the agents of the mills and in two important particulars the methods employed are radically different from the methods used by the English. In the first place, the goods are usually sold under the mill brand and not the brand of the importer as in the case of English goods. Secondly, except in a few rare instances, no one export house has exclusive control of a mill brand in the China market.
>
> It is not to be doubted that the American methods have their advantages. If the mill brand is used and it becomes firmly established on the market, the mill secures the benefit of the increased demand. If the importer has his own brand put on the goods the mill loses its identity, and it is always possible in standard cloths, such as sheetings and drills, for the importer to secure his supply of goods from another source if any differences regarding price, quality, shipments, etc., arise with the original mill. This works a hardship on the mill which may have special preparations for producing the particular kinds of goods in demand.
>
> American manufacturers have also generally refused to confine a certain brand to one importer, preferring rather to sell to any firm that desired to buy. While the practice of giving exclusive control of a brand to one firm may be subject to some abuse and may restrict trade, it is undoubtedly a farsighted and commendable policy if due care be taken in the selection of the firm and proper support and cooperation be given to it. By far the greater part of the English trade has been built up along these two lines, the importer using his own brand and having the exclusive right to the sale of goods under it. This gives him an incentive to build up a trade, because, once a demand for the goods is established, he is sure of a profitable return for his efforts and expense in introducing them. The importer who handles American goods, on the other hand, is on the same basis as many of his competitors, who have an equal opportunity to buy the same goods under the same brand.
>
> From the importers' standpoint there are two great disadvantages in this system. In the first place, if an importer selects a certain brand of American cloth and succeeds, after considerable work and expense, in establishing it in the market, he soon finds that competing firms can purchase the identical goods and secure some of the benefits which he has made possible in making the cloth popular in the market. In the second place, this practice, in the opinion of many, often results in that great demoralizing and depressing influence in the Chinese cotton goods trade, the overflooding of the market. A brand of American sheetings may, through the aggressive efforts of an importer, become well established on the market and be in good demand; other firms with New York branches or connections, hoping to profit by the popularity of

> the brand, may order on their own account a quantity of the same goods, taking advantage of the mill agents' policy of selling to all who want to buy. The immediate result is that the market becomes overstocked; dealers are induced to load themselves up with more goods than they require, competition reduces prices to such a low level that there is no profit in handling the goods, and the importers become disgusted with the whole business and turn to other lines. The competition of cheap Japanese sheetings and drills has been a strong factor in the decline of the American cotton goods trade in China, and its importance should not be overlooked; but the disappearance of many brands of American cloths which formerly had a good sale in the market has been hastened, in the opinion of practically every importer whom I interviewed, by the failure of American manufacturers to properly conserve their interests and confine the sale of certain brands to one single firm.

The dye trade has been almost entirely monopolized by the Germans in the past, but as a result of the war the imports from that country have been reduced to nothing. Here is an opportunity that American manufacturers should not overlook. In the year 1913, the year before the war, imports of aniline dyes and artificial indigo from Germany into China amounted to more than $9,000,000 gold out of a total of less than $11,000,000.

In electrical materials and equipment the United States has been forging ahead during the past three years, but Japan and Great Britain are formidable competitors, and Germany, which at one time had the largest trade in this line, may have to be reckoned with when the war is over. American electrical machinery and supplies bear a favorable reputation, and, when national favoritism is not shown, there ought to be increasing sales as years go on. The increased purchases of American electrical machinery in China during the past several years are due more to the impossibility of securing the goods from Great Britain than to any preference for American machinery. Orders of any importance are generally called for by tenders, and the municipal council, the largest buyer, does not bind itself to accept the lowest or any tender. Several of the large American manufacturers of electrical machinery are now represented in Shanghai, with the assistance of technical staffs, and ought to be able to take advantage of every opening or call for this class of machinery.

Enameled ware used to be a specialty from Austria-Hungary and Germany, being very low in price. But since the war Japanese enameled wares have almost entirely monopolized the trade. Imports from the United States have increased, but it is claimed that American enameled ware is too expensive, though the quality is conceded to be superior.

Window glass for this market was formerly supplied almost exclusively from Belgium, but Japan holds about four-fifths of this trade at the present time, the remainder of the glass coming from America.

Softwood lumber, of which about 50 per cent formerly came from the United States, has lost ground considerably as a result of high freight rates. But it is expected that this condition of the American lumber trade with China will only be temporary and that, with the return of normal shipping conditions, American lumber will again take its proper place in the trade of Shanghai.

Up to the year 1915, cotton-mill machinery came almost entirely from Great Britain, but, during the year 1916, large orders were placed with American houses by Chinese interests. As years go by there is no doubt that the cotton industry will assume immense proportions, and there should be a splendid opportunity for American cotton machinery in the development of this industry. The predominance of British cotton machinery at the present time is due to the fact that most of the mills are controlled by the British.

In propelling machinery, such as boilers, turbines, etc., American products have been coming in large quantities since the war, but Great Britain remains the principal exporter. British shipping generally stands at the head of Shanghai's carrying trade; therefore it is only natural that most of the propelling machinery should be imported from Great Britain.

In medicines, Japan and Great Britain hold the largest share of the trade, but during the war period American goods have been imported in increasing quantities.

The United States leads in the iron and steel trade, and it is not likely that any other country will be able to take away this lead.

The United States has always been the leading exporter to China of kerosene and lubricating oils. The foremost American producers of these oils are represented in Shanghai by their own staffs. Japanese illuminating oil is, however, steadily encroaching upon the American trade in this product, because, though it is of inferior quality, it can, for that reason, be sold very much more cheaply. The Chinese consumers of this illuminant, the agricultural and coolie classes, are influenced more by the price than by the quality of the oil.

Soap is imported chiefly from England and Japan. A particular brand of American bar soap has lately been introduced and has, it is understood, met with a certain measure of success.

Tobacco leaf has come chiefly from the United States and its possessions during the past, but since the war, owing more to shortage of shipping facilities than to any other cause, the quantities have decreased considerably.

In locomotives and tenders there should be a great future for American products at the close of the war. At present very little progress is being made in the increasing of railway facilities, principally on account of the difficulties of finance.

SALES BY AUCTION.

Approximately one-third of the imported piece goods are sold by auction, and this method of selling has been confined principally to English goods. Some of the firms sell on their own account, others sell on joint account with the manufacturers; and the fact that this method has been carried on since the seventies shows that it must have been profitable, though at times losses have occurred.

Following the revolution of 1911, failure among native merchants to take up goods ordered became very common, and especially in the piece goods trade it worked considerable hardship to the importers; carrying over charges were high and profits on piece-goods transactions low. Instances have occurred in which firms had to close up owing to the inability of their indentors to meet their obligations. Within the last few years, however, conditions have improved, because of the difficulty of procuring goods.

SALES THROUGH COMPRADORS.

Business in practically all lines, and in piece goods in particular, is done through compradors. Every firm of any consequence has a comprador of good financial standing and his set of market shroffs who keep in close touch with market conditions and are able to determine the financial standing of native dealers, enabling the firm to do business with safety, because, to a greater or less degree, the comprador guarantees the firm against any loss that may occur through the failure of a buyer to take up goods ordered.

The compradors of to-day are, however, more inclined to speculate on their own account than in former times, and as they possess great influence with their employers their speculations are winked at, since, in practically every case, the comprador has a fund of a certain amount deposited with his employer, who generally recoups himself from this fund.

It has lately been urged that it is possible to eliminate the comprador, but, as conditions are at present, it would appear that any other system of selling would, in the long run, be more expensive. This is a system that has been handed down from generation to generation.

It is admitted that attempts to sell goods directly to natives have met with a fair measure of success, especially in such lines as kerosene and tobacco; but when several lines are handled the comprador is still the man (in spite of the fact that there are foreign salesmen) who can tell whether or not the prospective buyer is dependable.

VALUE OF PRINCIPAL FOREIGN ARTICLES IMPORTED.

The following table shows the gross value of the principal foreign articles imported into Shanghai from foreign countries and Hongkong during the years 1904, 1913, 1915, and 1918:

Articles.	1904	1913	1915	1918
Arms and munitions	....	$429,438	$31,728	(a)
Bedsteads, brass and iron	$31,775	150,742	72,702	(a)
Belting, machine	53,108	135,263	148,364	(a)
Benzine	....	33,021	60,059	$188,198
Biscuits	52,197	65,239	36,104	(a)
Books, printed	148,052	218,751	112,795	263,891
Building material	42,547	31,798	63,117	(a)
Butter	143,331	177,640	133,753	378,915
Candle-making stearin	....	135,726	146,856	288,527
Candles	361,163	177,066	201,400	1,015,387
Canned goods:				
Fruits and vegetables	63,175	117,383	70,724	192,303
Meats	46,762	20,372	21,842	(a)
Milk	150,974	210,054	205,137	400,322
Chocolate	5,356	5,394	14,602	(a)
Cigarettes	1,634,581	4,958,406	4,832,907	16,133,789
Cigars	165,595	239,527	180,410	606,732
Clocks	134,739	231,532	113,288	238,957
Coal	2,888,404	3,933,333	2,831,643	9,495,652
Coffee	20,069	42,425	40,561	165,286
Cotton, raw	248,467	1,891,280	3,850,944	6,600,422
Cotton goods:				
Drills—				
American	3,333,519	1,551,400	234,639	246
English	223,417	133,367	33,741	35,146
Japanese	76,176	545,595	557,195	1,041,871
Dyed cottons—				
Italians, plain, black	4,224,789	4,070,050	2,270,199	4,291,257
Venetians, black	....	1,704,017	1,718,217	2,779,531
Flannels, plain, dyed, and printed, 30 yards—				
American	1,003,735	839,723	428,109	....
English	97,794	278,056	27,688	6,016
Japanese	48,333	43,554	194,353	973,873
Jeans—				
American	301,772	119,217	11,093	59,061
English	679,779	3,574,765	1,992,181	647,565
Japanese	....	29,545	695,567	6,016,430
Sheetings—				
American	4,487,683	4,531,799	1,226,990	522,998
English	1,255,890	352,159	119,646	58,180
Japanese	194,185	320,688	368,968	3,059,168

a Figures for 1918 not available.

Articles.	1904	1913	1915	1918
Cotton goods—Continued.				
Shirtings, grey—				
American	$473,998	$120,302		
English	6,700,875	8,724,315	$4,939,645	$3,080,949
Japanese	6,239	24,736	285,268	2,128,301
Shirtings, white—				
American	611	6,990		
English	5,385,022	10,367,379	6,208,910	8,732,486
Japanese		25,287	158,132	2,244,952
T-cloths—				
English	775,405	1,951,649	700,950	681,039
Japanese	52,875	194,990	192,455	775,744
Thread	141,843	257,868	218,392	164,472
Yarn, grey and bleached—				
Indian	15,668,523	13,210,270	8,832,496	5,502,545
Japanese	8,014,658	10,331,955	7,941,432	11,561,040
Dyes:				
Aniline	987,882	2,647,962	41,875	1,714,557
Indigo—				
Liquid, artificial	609,321	5,691,531	2,280,036	(a)
Paste		446,847	217,015	(a)
Electrical materials	156,186	985,133	648,145	1,349,927
Enameled ware:				
Basins		292,700	26,724	357,380
Bowls, cups, and mugs	22,068	92,368	22,554	(a)
Unclassed	38,949	137,966	13,356	(a)
Fire-extinguishing apparatus	4,165	19,308	18,158	(a)
Flour, wheat	227,027	572,283	52,608	95,990
Garters and suspenders		101,767	60,052	475,725
Gasoline	1,142	3,061	8,318	(a)
Glass, window	192,126	252,553	162,827	452,185
Graphophones and accessories	51,225	59,479	78,671	102,662
Haberdashery, millinery, and drapery	243,032	289,180	170,615	395,937
Hosiery	15,792	75,238	41,714	103,249
Instruments:				
Drawing, nautical, and surveying		39,373	29,668	(a)
Medical and surgical	21,316	77,349	52,502	(a)
Lamps and lamp ware	181,142	357,155	81,464	279,485
Lanterns, all kinds		99,735	4,995	
Leather:				
Calf, kid, and colored	10,715	112,483	40,753	325,592
Cow—				
American and European	13,951	1,888	1,096	(a)
Hongkong and Straits	51,510	256,644	298,616	1,228,253
Sole	30,424	101,652	48,947	375,685
Locks and padlocks, brass and iron		91,019	54,664	131,774
Lumber:				
Hardwood	191,639	169,372	177,204	821,748
Softwood	775,793	1,569,048	956,515	2,620,864
Teak	101,797	189,865	110,121	(a)
Machinery:				
Cigar and cigarette	544,009	12,732	3,182	(a)
Cotton-mill		506,512	736,910	1,504,736
Electric		54,360	62,557	488,284
Flour-mill		64,164	61,030	90,372
Printing		140,395	36,659	(a)
Propelling (boilers, turbines, etc.)		182,753	171,270	554,596
Machines, sewing and knitting	23,791	181,244	61,487	(a)
Meats: Bacon and ham	46,762	54,753	31,249	(a)
Medicines	169,119	368,919	339,167	1,626,561
Medicines, patent		272,615	236,029	
Metals:				
Iron and mild steel, all kinds	2,439,757	3,585,077	2,273,752	7,639,291
Iron, galvanized, all kinds	250,395	849,402	498,658	658,955
Lead, pigs and bars	373,487	260,702	323,137	483,151
Steel	119,572	183,407	24,947	(a)
Tin—				
Slabs	505,497	201,963	163,350	709,725
Plates	219,526	372,015	797,730	3,960,719
Needles	324,643	331,108	21,930	(a)
Oil:				
Lubricating	132,754	234,106	374,134	1,356,167
Kerosene	10,050,968	3,602,748	3,735,065	12,806,281
Opium, Indian	14,050,781	22,227,608	12,243,352	
Paper, all kinds	586,174	2,556,552	1,585,792	2,667,766
Paper-making material: Wood pulp	40,049	81,172	66,091	265,811
Perfumery	89,992	144,491	100,015	(a)
Photographic materials	62,189	87,658	73,794	135,706
Piece goods:				
Canvas	53,379	118,714	44,334	71,615
Cotton duck	33,141	105,204	63,479	93,413
Printing ink	9,096	73,812	54,009	172,973
Provisions		132,033	95,780	159,950

[a] Figures for 1918 not available.

Articles.	1904	1913	1915	1918
Railway material: Bridge-construction materials, wooden sleepers, etc	$20,929	$91,222	$141,227	(a)
Shoes and boots, leather	37,547	80,855	55,738	(a)
Shooks for barrels, casks, etc		43,944	62,158	(a)
Singlets and drawers: Cotton and wool underwear	42,666	342,770	100,391	$388,541
Soap, all kinds	475,100	1,201,670	734,286	1,380,630
Socks, cotton	124,652	815,546	167,796	726,784
Soda ash	171,590	352,114	260,639	1,171.026
Stationery: Account books, blank books, etc	155,586	328,592	125,964	281,827
Stoves and grates	36,676	160,006	47,756	(a)
Sugar, all kinds	5,006,351	8,547,220	8,063,991	23,522,497
Telegraphic materials	185,969	103,397	112,837	132,016
Telephones, and material for		82,236	31,490	
Tobacco, leaf	121,912	1,482,144	276,654	5,584,271
Toilet requisites	63,563	118,500	73,003	(a)
Typewriters and accessories	17,479	66,690	64,966	184,973
Vehicles:				
Locomotives and tenders		117,248	140,971	(a)
Motor cars and accessories	27,105	242,305	234,405	(a)
Railway cars and wagons		15,524	75,490	(a)
Watches	182,408	171,963	71,545	441,302
Wines, spirits, beers, liquors, etc	774,678	754,739	491,569	1,997,757
Woolen and cotton mixtures:				
Blankets and rugs	122,327	158,151	1,732	(a)
Melton cloth		312,462	12,945	(a)
Union and poncho cloth	96,651	382,393	118,147	151,988
Woolen goods:				
Coatings		68,838	36,688	298,698
Broadcloth	297,118	293,922	11,634	(a)
Suitings		108,374	28,933	363,679
Wool, "Berlin"	338,730	497,360	232,951	443,086
All other articles	27,028,320	36,087,981	27,026,673	82,719,298
Total	128,717,118	181,261,470	121,307,203	256,456,713

[a] Figures for 1918 not available.

In shipping facilities Shanghai in normal times enjoys every convenience. Lines from Europe, America, and Japan call constantly at Shanghai, and competition among them is very keen. At the present time shipping facilities are very restricted and freight rates abnormally high.

To well-established firms the Shanghai banks extend the same facilities as are generally afforded in the United States. In addition, the banks as a rule can furnish American manufacturers with all the necessary information regarding the standing and reputation of firms located there.

The distribution of goods is generally undertaken through the comprador, who generally holds himself responsible for the goods so disposed of. Storage accommodation is afforded at the public warehouses, though large importing firms generally have their own warehouses. Imported goods pay, in general, a duty of 5 per cent ad valorem. A sum equal to one-quarter of 1 per cent is charged for river conservancy and wharfage dues.

By paying a sum equivalent to one and one-half times the usual duty, a transit pass is issued which entitles the goods to travel throughout the country without any further charge.

As regards packing, generally speaking, goods subject to deterioration by heat and moisture should be packed in tin or zinc lined wooden cases. All other goods should be packed in such a manner as to enable them to withstand the rough handling in loading, unloading, etc., on such long journeys. Boxes should be thoroughly strap-ironed in every case.

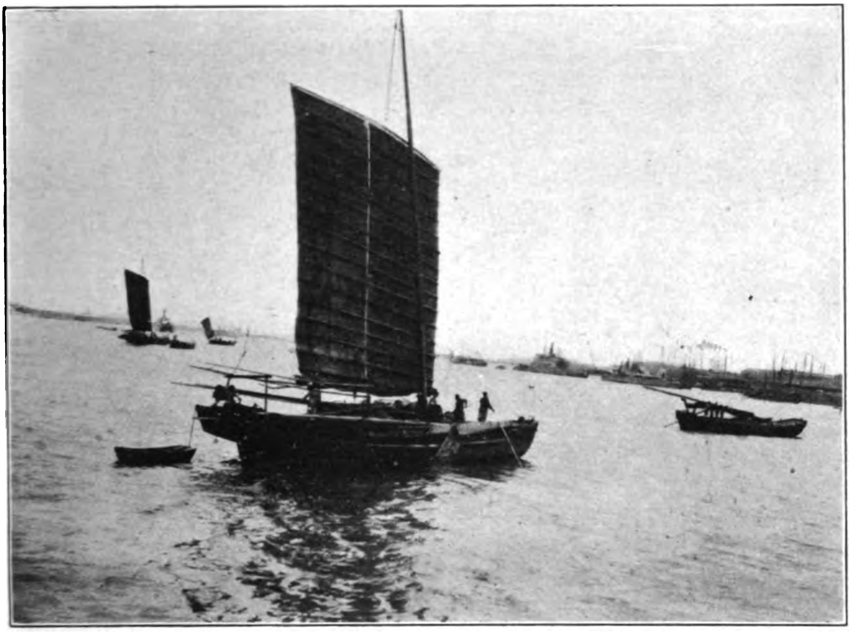

FIG. 26.—CHINESE CANAL AND HARBOR BOAT WITH SAIL UP, SHANGHAI.

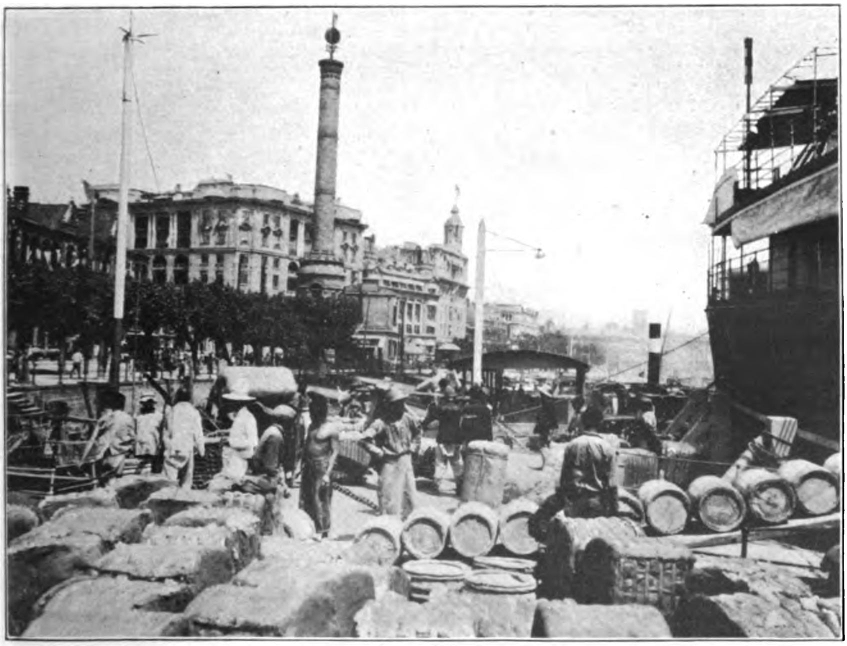

FIG. 27.—WORKING CARGO ON A PONTOON OR LANDING STAGE, SHANGHAI,

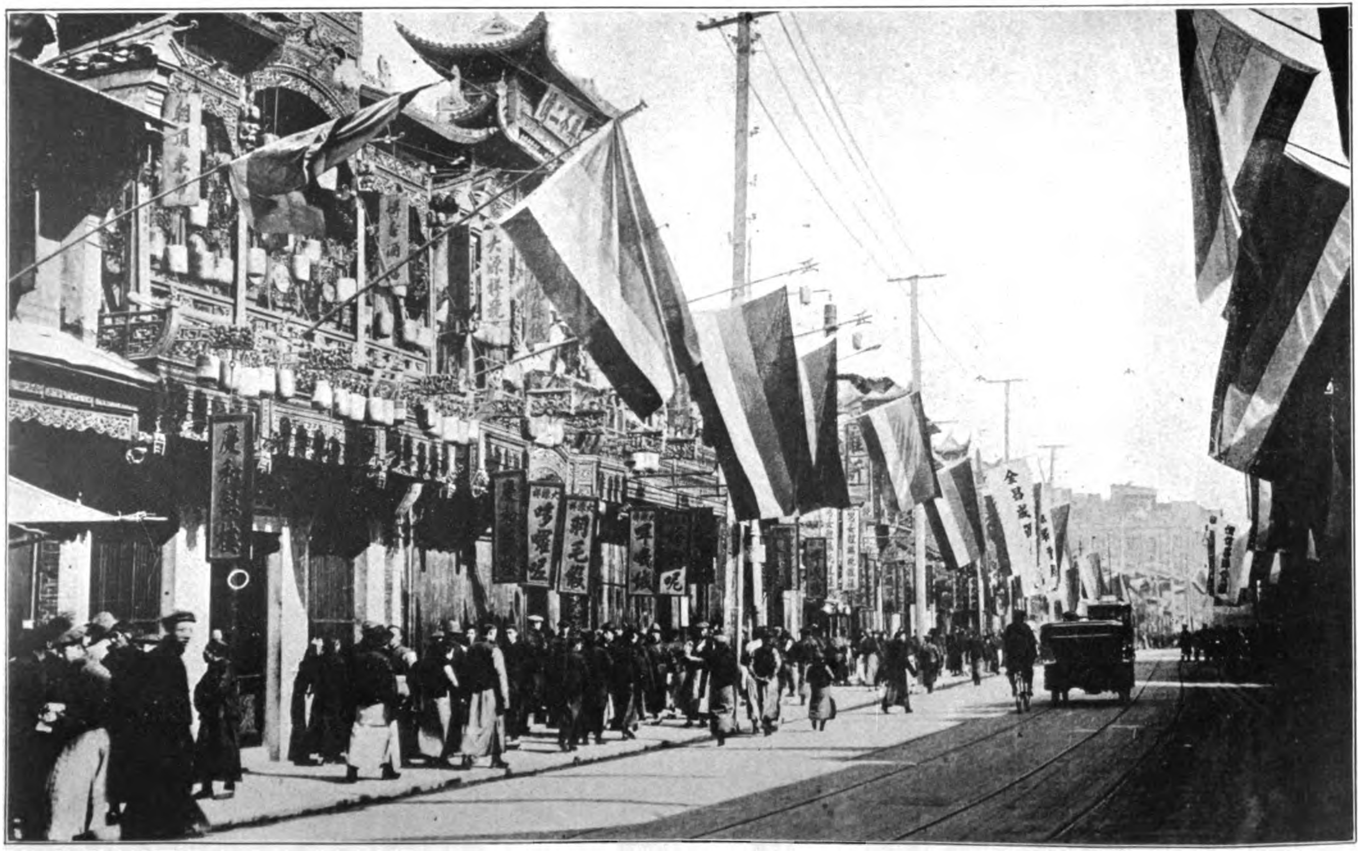

FIG. 28.—NANKING ROAD, SHANGHAI.

The Broadway of the Far East.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

As stated elsewhere in this report, shipping facilities to the United States are ample and rates are very reasonable in normal times.

The principal steamship lines between Shanghai and the United States are the China Mail Steamship Co. (American), the Pacific Mail Steamship Co. (American), and the Toyo Kisen Kaisha (Japanese), all running to San Francisco. The last-named lines have a monthly service between the ports named. The Canadian Pacific Services (British) maintain four steamers with connections to the United States and Europe via Vancouver, British Columbia. They have about two sailings a month each way. The Osaka Shosen Kaisha (Japanese) runs steamers to Tacoma and Seattle every fortnight. The Nippon Yusen Kaisha (Japanese), calling at Victoria, British Columbia, and Seattle, Wash., has sailings about once a month.

Sailings from Shanghai to New York direct are maintained, but this service is at the present time very irregular.

The shipping facilities between Shanghai and other treaty ports in China are as follows:

Shanghai-Amoy-Swatow and vice versa.—Sailings about the end of the week in both directions by steamers of the China Navigation Co. (British).

Shanghai-Foochow.—Sailings irregular; trip takes only two days; China Merchants Steam Navigation Co.

Shanghai-Hankow.—On this run steamers call at Chinkiang, Wuhu, and Kiukiang. The China Navigation Co.'s steamers leave Shanghai every Tuesday, Wednesday, Friday, and Saturday. The Indo-China Steam Navigation Co.'s (British) steamers leave Shanghai every Monday, Tuesday, Wednesday, and Friday. The China Merchants Steam Navigation Co.'s steamers (Chinese) leave Shanghai Monday, Tuesday, Thursday, and Sunday. The Nisshin Kisen Kaisha (Japanese) vessels have five sailings a week each way.

Shanghai-Hongkong-Canton.—Sailings from Shanghai Sundays, Tuesdays, and Thursdays, by the China Navigation Co.'s steamers. The Indo-China Steam Navigation Co. and the China Merchants Steam Navigation Co. also maintain frequent sailings over the same route.

Shanghai-Newchwang-Dairen, via Chefoo.—Frequent sailings maintained by the China Navigation Co.

Shanghai-Tientsin.—The China Navigation Co. maintains regular sailings from Shanghai on Tuesdays, Saturdays, and alternate Thursdays. The Indo-China Steam Navigation Co.'s steamers leave Shanghai on Sundays and Thursdays. The China Merchants Steam Navigation Co. also maintains a service, which, however, is irregular. The Kailan Mining Administration also runs steamers on this line, their steamers leaving Shanghai every three or four days.

Shanghai-Tsingtau-Dairen.—The South Manchuria Railway Co. (Japanese) has sailings every Tuesday and Friday from Shanghai.

Shanghai-Ningpo.—The China Navigation Co., the Ningpo-Shaoshing Co. (Chinese), and other companies have regular sailings between Shanghai and Ningpo.

The war affected local lines considerably. Many steamers operated under the British flag were requisitioned by the British Government. Consequently, local shipping has been somewhat restricted, with freight rates considerably higher than before the war.

There are in this district four foreign express agencies that handle shipments. They are the American Express Co.; Thomas Cook & Sons (British); Schiller & Co. (British); and James Magill & Co. (British).

The following scale of charges is maintained by the Shanghai-Hongkew Wharf Co. (Ltd.), one of the oldest wharf companies in existance in Shanghai:

Vessels are received alongside the wharves and cargo received on the wharf staging or pontoons, stored and delivered on the wharf staging or pontoons at tariff rates, free of rent charge, if taken away within 10 days from date of berthing (the date of berthing counts as one day). Goods are delivered during customs working hours free of extra charge when delivery is effected from the same section in which it was landed. The rates of wharfage for vessels carrying mixed Chinese and Japanese merchandise are 30 candareens (normally about $0.20 gold) per foot. Vessels under 300 feet carrying coal are charged 65 taels, and vessels over 300 feet 0.35 tael per foot. Over-sea steamers other than those already mentioned are charged 0.65 tael per foot. Lorchas are charged 50 taels.

Vessels from foreign ports remaining at the wharf for more than five days will incur an extra charge of 50 taels for the first day and 75 taels for the second and every succeeding day or part thereof. Coasting vessels remaining at the wharf for more than three days incur an extra charge of 30 taels for the first day and 50 taels for the second and every succeeding day or part thereof. The Chinese Maritime Customs levy tonnage dues at the rate of 0.40 tael per registered ton for each quarter of the year.

FACILITIES FOR TRAVEL.

The facilities for travel in the Shanghai district have already been fully described in the discussions of railways and steamship lines. The best seasons to visit Shanghai are in the spring between April and June or in the fall between September and about the middle of December. There are plenty of first-class hotels in Shanghai, where every hotel convenience can be obtained at rates from $5 to $10 (Mex.) per day. Hotels are to be found at most of the treaty ports at prices approximating those charged in Shanghai. Bookings to every point, whether by rail or steamer, can be arranged through such agencies as Thomas Cook & Sons and all the railway and steamship offices. The hotels in Shanghai can arrange for house-boat trips to Soochow, Hangchow, and other places if the traveler cares to go along some of the many waterways of China. These trips are very popular in Shanghai, especially during the fall and early winter months. The native city of Shanghai also deserves a visit, and the curio hunter should find there many interesting and valuable articles. The Tu-shen-wei orphanage for boys at Sikawei, conducted by the Jesuit Fathers, is another place of interest. It was founded in 1847, destroyed by the Taiping rebels in 1860, and reestablished in 1864. Here hundreds of native children are received and learn handicrafts. There are studios of sculpture and painting. The printing works, which were started in 1873, possess collections of European type and Chinese mobile type. At Sikawei is also established the meteorological observatory, founded in 1871 and rebuilt in 1900. It is situated in latitude 31° 11′ north and longitude 120° east. From this observatory are given out the daily weather forecasts, which have been of great service to the marine community. There is also the Natural History Museum, begun in 1863, where a special study is made of the zoology of the Far East.

TRADE ORGANIZATIONS IN DISTRICT.

The Shanghai foreign trade organizations are: The Shanghai General Chamber of Commerce, a cosmopolitan organization composed of the foremost merchants of Shanghai; the American Chamber of Commerce of China; the British Chamber of Commerce of Shanghai; the French Chamber of Commerce of Shanghai; the Italian Chamber of Commerce; the Japanese Business Men's Association; the Deutsche Vereinigung (German Chamber of Commerce); the Engineering Society of China; the Foreign Silk Association of Shanghai; the Shanghai Cotton Anti-Adulteration Association; the China Tea Association; the Shanghai Fire Insurance Association; the Institute of Architects in China (Inc.); the Association of Foreign Bankers; the Shanghai Marine Underwriters' Association; the Exchange Brokers' Association; the Shanghai Stock Exchange; and the Shanghai Sharebrokers' Association.

The principal native associations are: The Chinese General Chamber of Commerce (the most influential chamber); the Chinese Merchants' Cooperative Association; the Chinese Sharebrokers' Association; and the Chinese Association of Foreign Goods Merchants.

The principal native guilds are: Tea merchants; timber merchants; paint and varnish merchants; bankers' exchange; Hangchow silk-piece-goods dealers; silk-piece-goods merchants; gold merchants; coal merchants; rice merchants; cotton dealers; timber importers; jewelers; leather-goods dealers; ginseng dealers; cotton-yarn dealers; Shantung pongee dealers; silk-filature proprietors; silk merchants; egg merchants; sugar merchants; pawnbrokers; ham dealers; Japanese piece-goods merchants; foreign general goods dealers; cotton-piece-goods merchants; silversmiths. In addition to those mentioned, there are guilds for practically all trades.

AMERICAN INTERESTS.

COMMERCIAL INTERESTS.

American business interests in Shanghai received a great impetus in 1915 by the formation of an American Chamber of Commerce. The aims of the chamber, as set forth by the president on the occasion of a banquet tendered to the American Minister at the Palace Hotel on July 3, 1916, are:

> To foster and protect the interests of American commerce; to collect information on matters of interest to the American mercantile community; to use every means in its power for the removal of evils, the redress of grievances, and to communicate with the proper authorities with respect thereto; to place before the proper authorities the requirements of American merchants for improved shipping facilities; to insure equal trading rights with all nationalities; and to obtain a Federal building of size and grandeur consistent with the greatest nation on earth, in which the American consulate general and judiciary may be well housed and in which the American Chamber of Commerce should be housed.

American business interests have expanded considerably, especially during the years 1916 and 1917. In 1916, for the first time, the United States transacted the largest volume of business with the port of Shanghai. In 1917 the combined import and export trade of the United States totaled $110,117,833 United States currency, as against $109,071,196 and $68,793,791, respectively, for Japan and Great Britain, the nearest competitors. In 1918 the American share was $97,145,554, as compared with $164,912,627 for Japan and $81,769,079 for Great Britain.

Several American firms have opened offices in Shanghai during the last three years, and, with adequate shipping facilities, there is every reason to believe that business with the United States will assume and maintain immense proportions in the future. American houses represented in Shanghai handle practically every line of goods bought or sold in China.

In the past British trade interests at this port were paramount, being closely followed by those of Japan, the proximity of Hongkong and Japan to this port having placed them in very favorable trade positions. Most of Shanghai's enterprises are registered under the Hongkong ordinances and, though the majority of the capital stock of a concern may not be British, companies are floated as British concerns, owing to the ease with which this may be done. Since the war, however, it has been stipulated by the British authorities that a British registered company must have a majority board of British directors and that the secretary of the company must also be British. It would appear that if the same facilities were afforded to American local enterprises in this respect by United States authorities, American trade interests would be greatly benefited thereby.

On the other hand, Americans enjoy the good will of the natives more than the citizens of other countries, and this is an asset that is worth conserving.

As indicated elsewhere, in connection with imports and exports, the European war has certainly benefited American trade. The cutting off of the supply of German and Austrian made goods and the curtailment of British trade have caused large orders to be placed in the United States, and it remains for the American manufacturer or exporter to retain this trade after the war. Lack of proper American shipping facilities curtailed this increase more than anything else.

Certain complaints have come to the notice of the Shanghai consulate general, and these should be remedied. Where orders are placed and are accepted by cable by houses in America, it should be borne in mind that the acceptance of the order binds the house in Shanghai, and that a repudiation of the order after it has been accepted places the Shanghai business firm in a very awkward position. Expensive legal proceedings are likely to result, to say nothing of the fact that it is very difficult for a firm that has once repudiated its orders to regain the confidence of the Chinese traders, who are the largest buyers of foreign products. Firms have been known to spend hundreds of dollars, losing all their products and suffering heavy losses besides, by purchasing goods elsewhere after their accepted orders have been repudiated by American exporters.

MISSIONARY INTERESTS.

Shanghai is the principal center of missionary work in China, and the American missionary interests represented there are: The American Church Mission; the Baptist Mission; the Methodist Mission; the Presbyterian Mission (North); the Seventh-Day Adventists; the Women's Union Missionary Society; the Shanghai Young Men's Christian Association; the Women's Christian Association of Shanghai; the American Bible Society; the Christian and Missionary Alliance; and a few smaller missions.

A splendid description of mission work in China was printed under the general heading of "What the Christian missions are doing in Shanghai" in the China Press, of Shanghai, under dates of November 26, 28, and 29, 1916.

It is estimated that American missionary interests in Shanghai are the largest in extent. Education is the principal line of work. The Chinese Young Men's Christian Association in Shanghai is the largest city organization in the Far East, and is under the direction of American Young Men's Christian Association secretaries.

The following further data concerning missionary, educational, and other work in China may be of interest:

The first American Protestant missionaries arrived in China in 1829 and the first girls' school was started in Ningpo in 1844. The first college was opened at Tungchow, Chihli, in the year 1860. There are no data at hand to show what educational work may have been done by Roman Catholic missions prior to the dates given.

The average number of pupils in mission schools during the 13 years from 1876 to 1889 was 11,377, or a total of 147,901; during the 16 years from 1889 to 1905 the average was 37,259, or a total of 576,144; during the 10 years from 1905 to 1915 the average was 115,328, or a total of 1,153,280. Allowing 4 years (a very liberal allowance) as the average period of study, it will be seen that about 469,331 persons have been taught in Protestant mission schools in China since the year 1876. Of these, approximately 92 per cent have been taught in the English language, and the remaining 8 per cent in the several Continental European languages. The data may be further summarized thus:

Years.	Number of pupils.	American.	British.	Continental.
		Per cent.	*Per cent.*	*Per cent.*
1876	5,917	52	37	11
1889	16,836	58	36	6
1905	57,683	50	42	8

This shows that during the three years listed the approximate percentage of those attending American mission institutions in China was 53⅓ per cent, of those attending British institutions in China 38⅓ per cent, and of those attending all other Continental European mission institutions in China 8⅓ per cent.

During the first 15 years of the present century about 37,500 students have passed through the mission high schools and 3,750 have continued their education in colleges. No figures are at hand for the 24 years prior to 1900.

Up to the year 1905 a very large percentage of foreign educational work was done by the mission schools. Since then the Government has instituted foreign studies in its schools, and the number of pupils now receiving foreign education in mission schools, although much larger in fact than in previous years, is but a small percentage of the total number of students receiving foreign instruction in China.

The latest figures available show that North America spent $18,793,991 gold for Protestant mission work in 1916, while all others—the various British and Continental European Protestant nations—spent in 1913 the sum of $13,884,411 gold, making a total of $32,678,402 for one year. (These figures are the latest available.) Of this total amount approximately 20 per cent, or $7,535,680 gold, was spent for mission work in China. Of the $7,535,680 spent in China in one year, North America spent approximately $3,758,798, or 49⅘ per cent.

The American Young Men's Christian Association has expended approximately $2,750,000 in China, about $1,000,000 of which represents buildings.

The total number of American foreign mission workers in the world in 1915 was 10,497, and of all other societies—of the various British and Continental European Protestant nations—14,173 in 1912, making a total of 24,660 workers. Of this total, about 22 per cent are in China, making 5,338 (of whom 2,309, or about 43 per cent, are American) Protestant mission workers in China.

St. John's University, under the American Church Missionary Society, with its St. John's College for boys and St. Mary's Hall for girls, is probably the largest missionary educational institution in China. The total value of its present plant is approximately $325,000 gold and $50,000 is appropriated annually for its upkeep. The total expenditure at St. John's since its beginning, including salaries, is more than $1,000,000.

The China agency of the American Bible Society distributed 12,982 Bibles, 62,951 testaments, and 2,198,777 portions, a total of 2,247,710 units, in the year 1916. This is an increase of 2,055,495 units over the total distribution made in 1893 by the American, British, and National Bible Societies. The figures for the year 1915 show that the American Bible Society distributes about 36 per cent of all the Bibles and testaments given out in China.

GENERAL TRADE SUGGESTIONS.

American manufacturers and exporters wishing to place their goods in Shanghai should form connections with an established firm in that port and, if possible, give such firm the sole agency for the sale of their products. Thus the importer is encouraged to push the particular line or brand.

Another plan that is generally followed by large British exporters is to send commercial travelers to canvass Shanghai and outports every year and, eventually, either to open a branch establishment in Shanghai, if the trade obtained seems to warrant, or to place an agency with a local firm, sending full lines of samples and new quotations every season. A liberal allowance of advertising matter and a special allowance for advertising in local newspapers will be of considerable help to both the importer and the manufacturer.

A commercial library is maintained at the Shanghai American consulate general, where, from time to time, Shanghai merchants and others come for information. Exporters and manufacturers would do well to send their catalogues to this office to be filed, as they will be made available to all inquirers.

TIENTSIN CONSULAR DISTRICT.

By Consul General P. Stewart Heintzleman.

LOCATION AND AREA.

The Tientsin consular district is in the northeastern part of China, and comprises the whole of the Provinces of Chihli and Shansi and that portion of the Provinces of Honan and Shantung north of the Yellow River, together with all of eastern Mongolia, including the Ordos country and the territory inhabited by the eastern and southern Khalkhas.

The total area of the district is more than 270,000 square miles, equal to the combined areas of the New England States, New York, New Jersey, Pennsylvania, Maryland, Virginia, West Virginia, and Ohio. The Province of Chihli, which is the most important politically, the capital of the Republic being situated therein, has an area of about 115,000 square miles, while that of the Province of Shansi is approximately 80,000 square miles. The area of that portion of the district in Honan and Shantung is estimated at about 20,000 square miles, while the area of the Ordos country, a sparsely settled grazing region, is about 55,000 square miles. The location of the district corresponds to that of the States of America mentioned above.

POPULATION.

Until a census is taken by the methods adopted in western countries, the population of the Provinces of this district can not even be estimated with any approach to accuracy. A rough count taken by the Ministry of the Interior in 1910 gives the population of the Province of Chihli as 32,571,000, or 283 inhabitants per square mile. Shansi is given a population of 10,000,000, so that the total for the district can be placed at approximately 40,000,000, or two-fifths of the population of the United States. Peking, the capital of the Republic, has a population of about 600,000, while Tientsin, the most important commercial center of North China, has a population of not less than 1,000,000. The portion of Chihli extending from Peking to the coast is a great plain, and is densely populated; likewise the section north of the Yellow River is extremely populous, while the district north of the Great Wall is partly mountainous and partly rolling and has but few inhabitants. Another densely populated area is the Shansi Plateau, about 125 miles long and 30 miles broad. It has but one large city, Taiyuanfu, the capital of Shansi, with a population of perhaps 200,000.

The estimated percentages of rural and urban populations in North China are 80 and 20 per cent respectively.

PHYSICAL FEATURES.

The eastern part of the Tientsin consular district—the region that is the most densely populated and of the greatest commercial importance—is a plain, practically at sea level, extending from the coast to the hilly and mountainous section about 100 miles inland. The soil of this plain is an alluvium deposited in the deltas of numerous rivers, the largest of which is the famous Hwang Ho, or Yellow River.

The mountain range that forms the western boundary of the Chihli plain extends from the northern part of Chihli and Shansi to the Yellow River basin. Practically the entire Province of Shansi, with the exception of the Taiyuan Plateau, is covered by this mountain range and its foothills. The mountains are from 3,000 to 12,000 feet in height, and all are practically treeless.

The northern part of the Tientsin consular district, eastern Mongolia, is a vast prairie traversed by numerous rivers. The inhabitants are of a roving type, and though it is a country wonderfully adapted for agricultural pursuits, the Mongols devote their energies to horse and cattle raising.

The Yellow River forms the western and southern boundaries of this district. It rises south of the Koko Nor, or Ching Hai Lake, and, after turning north from Lanchow, the capital of the Province of Kansu, takes a northeasterly direction, forming one of the boundaries of the Ordos country. It then flows southward for about 500 miles between Shensi and Shansi before entering the great plain and finally emptying into the Gulf of Chihli. In traversing this region whose soil is of yellow loess formation, its waters become colored; whence the name of the river. Its total length is about 2,700 miles, and being shallow it is of little use for navigation.

The Yellow River has changed its course several times in history, causing great destruction of life and property. The mud and sand carried down by its waters have raised the bed of the river, which is several yards above the level of the surrounding country. To prevent overflowing embankments have been built, which require constant enlargement. These embankments often exist in series, one placed behind the other, so that, if one gives way, another may prevent an inundation. Despite these efforts to keep the river in its natural course, floods occur frequently, and the banks and dykes, being weak and constructed with materials offering little resistance, require constant attention. Though improvements and reclamation work have been undertaken by the Government from time to time, these efforts have proved temporary and ineffective. In many cases dykes have been constructed in one section that have caused injury to other sections or rendered useless improvements made elsewhere along the river.

Numerous small rivers traverse the Chihli plain, and while they are of no great importance as waterways, they possess some value in that innumerable small native craft are enabled to ply certain parts of their courses.

The district is bounded on the east by the Gulf of Chihli, the coast line being about 350 miles long. There are a number of shoals along the coast, and navigation with Tientsin is dependent upon the channels made by the Peiho at Taku, about 47 miles below Tientsin.

CLIMATE.

The climate of this section of China is somewhat similar to that of the northeastern part of the United States. The winters are clear, dry, and sunny, with a minimum of snowfall, but extremely cold at times, while the summers are similar to those of the Atlantic seaboard of America. At times the temperature rises in summer to 100° F., while the daily variation may be as much as 30° F., and falls in winter to 50° F. below zero, but the atmosphere is so dry that the sensations rarely indicate such extremes. Violent dust storms occur in the early spring and late autumn. The months of June and July are the rainy season. The average yearly rainfall, including snow, for this part of China is about 30 inches.

POLITICAL SUBDIVISIONS.

The Tientsin consular district, as stated, is composed of two Provinces of China proper, Chihli and Shansi, portions of two other Provinces, Honan and Shantung, and part of Inner Mongolia.

Chihli and Shansi are each administered by a "Tu Chun," or military governor, and a "Sheng Chang," or civil governor. The former exercises military power throughout the Province, while the latter is the highest civil authority. Next to the governors the most important provincial officials are the treasurer, commissioner of foreign affairs, commissioner of education, commissioner of industry, and officials of the provincial high court.

The Provinces are divided into districts. The district, or hsien, is the administrative unit. In each district there is a magistrate who controls the affairs thereof. He also presides over a court of first instance which deals with minor criminal and civil cases.

The capital, Peking, constitutes the "metropolitan district," which, though situated in the Province of Chihli, is quite independent of the provincial government. The governor of the metropolitan district has the same relation to the subordinate officials under him as the governor of the province has to the financial, educational, judicial, and other officials of the Province.

The commissioner of foreign affairs is an important Chinese official in that his duties have to do with foreign interests. He is stationed at each of the provincial capitals and the leading treaty ports. He is the special delegate of the Foreign Office at Peking, and a primary function is to facilitate the transaction of business with the foreign consuls. In cases where a foreigner desires to bring an action against a native, it is necessary that the consul of the plaintiff's nationality communicate to the commissioner of foreign affairs the charge, when the latter will in turn transmit it to the official directly concerned or to the proper court. Foreigners are not permitted to correspond directly with the Chinese officials, and it is necessary that the correspondence follow the procedure just indicated.

The police force in Chihli is fairly efficient, and its institution along reformed lines in recent years has wrought an improvement in the social life of the Province in general and Tientsin in particular. The police administration of Tientsin is praiseworthy, being under the control of a man of unusual ability and long experience in these matters. The men form a fine, upstanding, well-drilled body, and at the various substations undergo at least one hour's rigorous drilling every day. Each foreign concession has its own police department, usually consisting of a foreign chief of police and about 200 natives serving under him. The police, both in the native city of Tientsin and in the foreign concessions, are not patrols with a certain district to supervise, but for the most part are traffic policemen, each with his fixed post at the crossing of two streets, where he regulates the traffic of pedestrians, jinrikishas, carts, automobiles, etc. Besides these duties, matters relating to public health and fire prevention are controlled by the police. They attend to the sweeping, watering, and lighting of the main roads, and it is constantly remarked that these duties are well performed. In Peking a committee composed of representatives of the various foreign diplomatic missions administers the Legation Quarter.

EDUCATION.

GOVERNMENTAL POLICIES AND UNDERTAKINGS.

Educational reforms were inaugurated in 1905, up to which time inadequate funds and the absence of a fixed policy operated against the successful establishment of Government schools. It was in the autumn of that year, after the issuance of an imperial edict on the subject, that the question of public education in Chihli was taken in hand by the then Viceroy Yuan Shih Kai. Many schools and colleges, chiefly elementary and middle, and normal and elementary girls' schools, were established. Under Viceroy Yang Shih Hsiang educational work was continued and extended. Candidates for official employment were required, in addition to possessing a knowledge of the ancient classics, to have some acquaintance with the modern science of government. Many young men went to Japan, America, and Europe to be educated. The antiquated schoolmaster was dismissed. A vast educational scheme, embodying the new aims and methods, was framed by the Government. Primary schools, as well as high schools and training colleges for men and women, were established. Schools of law, science, agriculture, industry, mining, surveying, and languages were founded. An educational tax was imposed on the people. Temples were cleared of their contents and converted into seats of learning. New school buildings were erected. Expert teachers from America, Europe, and Japan were engaged. To encourage students to enter the schools, education, board, and lodging were given at a nominal charge. In Tientsin the Government opened a "depot of maps and books," in which textbooks, classified according to subject, were arranged for inspection and sold at prices lower than those in publishers' lists. Elementary schools were opened throughout the Province, and a middle school was started in each large city. In former days no provision was made to give Chinese women an education. In recent years that condition has been substantially altered. A girls' normal school was opened in Tientsin in 1911. Primary education steadily improves.

The subjects taught cover a wide field, embracing morals, Chinese literature, history, geography, mathematics, natural history, geology, physiology, political science, psychology, criminal law, civil law, constitutional law, international law, etc. While educational facilities have been greatly extended during the last decade, yet under present conditions it is difficult to obtain reliable information concerning the amount, scope, and value of educational work on the new lines. The total expenditure on education in 1917 for the whole of Chihli Province was $3,432,284. In Chihli education and culture are, on the whole, in advance of the standard prevailing in the other Provinces.

EDUCATIONAL ACTIVITIES OF MISSIONARY SOCIETIES.

The activity of missionary societies in the educational field is a potent and efficient factor in the progressive movement in the Tientsin district. In no part of China have these societies made more rapid progress. The people, bred in habits of self-support, have now come to take a large share in the work of maintenance and expansion. The American Presbyterian, the Methodist, the Congregational, and the Canadian Presbyterian Missions, the London Mission and the Church of England Mission, the Young Men's Christian Association, and the Catholic missions are the strongest in this district, both numerically and financially. This is, however, not a complete list of the many different missions active along educational lines in this district. The work of the missionaries is greatly appreciated by the Chinese, and many of the congregations support their own native pastors. Christian literature is provided and distributed through the medium of three different Bible societies—the British and Foreign Bible Society, the American Bible Society, and the National Bible Society of Scotland. Each mission center conducts a primary school, many maintain high schools, and all hold classes to assist the students to reach that standard required by the entrance examination of the institutions for higher learning, such as the Anglo-Chinese College, Tientsin, the North China Union College, Tungchow, and the Peking University, Peking. The last two universities have been recently amalgamated as the Peking University under an interdenominational board of managers which unites nearly all the mission societies in their educational work. The subjects taught embrace Bible study, mathematics, physics, biology, chemistry, science of teaching, philosophy, history, geography, and English. The North China Union Women's College at Peking, under missionary auspices, is one of the two institutions for higher learning for women in China. And in the Province of Chihli each of the large missions maintains, on an average, 10 boys' middle schools, 140 boys' primary schools, 8 girls' middle schools, and 75 girls' primary schools. In these mission schools the students pay a smaller fee and obtain admission somewhat more easily than in the native schools.

This foreign educational activity means much for the progress of this district. The educational classes are constantly increasing in number. Though the percentage of illiterates may be as high as 90, the Government is doing much to improve this condition by building new schools and placing modern equipment therein. The estimated expenditure for modern school supplies in this district is $70,000 per annum.

HOSPITALS.

There are a number of large, well-equipped, and up-to-date hospitals, both native and foreign, in Peking and Tientsin. Native hospitals are also to be found in the large towns in the interior, while medical missionary work is being carried on extensively in all the centers as well as in the larger outlying stations. The foreign nonmissionary hospitals are few in number and confined to Peking and Tientsin, with the exception of the hospital at Tangshan maintained by the Kailan Mining Administration. Well-equipped women's hospitals in charge of woman doctors are conducted by the various missions in the important towns. At all the hospitals in the district every sort of skilled attention is given to all applicants at a particularly low charge. This applies as well to the Chinese hospitals under the direction of foreign-trained doctors, where much useful work is being performed.

The large missions have established medical schools for the training of Chinese doctors and pharmacists at Peking and Tientsin. The activities of the Rockefeller Foundation in this district call for special comment. The Foundation, with the object of developing the science and practice of medicine in China, formed in 1915 the China Medical Board as its agency for conducting this work. In the same year the board acquired the property of the Union Medical College, including the hospital connected therewith, in Peking. This medical college, established in 1906, was maintained and directed by six missionary societies—the American Board of Commissioners for Foreign Missions (Congregational), the Board of Foreign Missions of the (American) Methodist Episcopal Church, the Board of Foreign Missions of the Presbyterian Church in the United States of America, the London Missionary Society (nonsectarian, but closely affiliated with the Congregational Churches of Great Britain), the Society for the Propagation of the Gospel in Foreign Parts (Church of England), and the London Medical Association. The China Medical Board has since purchased additional property adjoining the college and hospital, which are being enlarged and newly equipped. The board is also engaged in aiding a number of missionary medical schools and hospitals by providing equipment and other facilities and by making annual grants for the support of physicians and nurses selected by the mission boards. Further, the China Medical Board has created a number of fellowships in the United States for graduates of Chinese medical colleges, and a number of scholarships for Chinese graduate nurses and pharmacists. In addition, the board has granted fellowships to a number of medical missionaries in order that they may pursue graduate work while on furlough.

Modern hospital equipment is in general use in the institutions throughout the district, and the value of new hospital supplies imported yearly is estimated at $50,000.

LIST OF INSTITUTIONS.

A list of native colleges, schools, and hospitals, as well as of similar institutions under missionary auspices, in the Tientsin consular district follows:

NATIVE COLLEGES AND SCHOOLS.

- Paotingfu:
  - Chihli Provincial Normal College.
  - Government Middle Schools.
  - Government Agricultural School.
  - Government Veterinary College.
  - Military University.
- Peking:
  - College of Law and Politics.
  - Customs College.
  - Government University.
  - Ming Te College.
  - Peking Normal College.
  - Tsinghua College.
- Tangshan:
  - Tangshan Engineering College.

Tientsin:
- Army Peiyang Medical College.
- Chihli Higher Technical School.
- Fishery School.
- Government Middle School.
- Higher Industrial College.
- Nankai Middle School.
- Naval Middle School.
- Navy Medical College.
- Peiyang University.
- Peiyang Women's Normal College.
- Telegraph School.

NATIVE HOSPITALS.

Paotingfu:
- Wei Sheng Hospital.

Peking:
- Central Hospital.
- Isolation Hospital.

Tientsin:
- Peiyang Hospital.
- Peiyang Women's Hospital and Dispensary.

MISSIONARY COLLEGES AND SCHOOLS.

Peking:
- Bridgeman Academy for Girls (American).
- Chung Teh Hsueh Hsiao.
- Collège Français (French).
- École du Sacre-Coeur.
- École St. Michel.
- Hill Murray School for Chinese Blind.
- Mary Porter Gamewell School
- North China Union Women's College (American).
- Pei Hua Hsueh Hsiao.
- Peking Academy.
- Peking Union Medical College (American).
- Peking University (American).
- Soeurs de Charité.
- Truth Hall.
- Tsui Ying Hsueh Hsiao.
- Women's Medical College (American).
- Young Men's Christian Association School.
- Young Women's Christian Association School.
- Yu Ying Hsueh Hsiao.

Tientsin:
- École Municipal Français.
- Marist Brothers College.
- St. Joseph's High School.
- Tientsin Anglo-Chinese College.
- Tientsin Intermediate School for Chinese Boys.
- Young Men's Christian Association School.
- Young Women's Christian Association School.

MISSIONARY HOSPITALS.

Changli:
- Northern Methodist Board Hospital.

Fenchowfu:
- Fenchowfu Hospital.

Linchingchow:
- Elizabeth Memorial Hospital.

Paotingfu:
- Taylor Memorial Hospital.

Peking:
- Douw Hospital (American).
- Hopkins Memorial Hospital.
- Hospital St. Michel.
- Italian Hospital for Chinese.
- Peking Union Medical College Hospital (American).
- Sleeper Davis Memorial Hospital.
- St. Luke's Hospital.

Shuntehfu:
    Grace Talcott Hospital.
    Hugh O'Neil Memorial Hospital.
Techow:
    Williams Porter Hospital.
Tientsin:
    Chiaki Hospital.
    General International Hospital.
    Hospital St. Vincent for Chinese.
    Isabella Fisher Hospital.
    Laoling Hospital.
    London Mission Hospital.

FOREIGN NONMISSIONARY HOSPITALS.

Peking:
    Deutsches Marine Lazarett und Hospital für Privatkranke.
    Dojin Hospital.
Tangshan:
    Kailan Mining Administration Hospital.
Tientsin:
    Inouye Hospital.
    Isolation Hospital.
    Queen Victoria Diamond Jubilee Memorial Hospital.

AGRICULTURE.

North China is essentially an agricultural region, and practically the entire area of the Tientsin consular district is developed agriculturally. In the Chihli plain the land is cultivable and divided into small fields, in which farming is carried on in an intensive manner. Meadow land and pasture crops exist, and live stock are reared not only as beasts of burden but also for meat products. The farming implements in general use are the plow, the harrow, and a sort of cultivator, all of which are of primitive native manufacture. The method of tillage is very crude. In spring the farmer shovels up, with his primitive plow, 5 or 6 inches of earth into a ridge; on this he drops the seed and then rolls the ridge.

Cotton and wheat are the most important of the crops and, along with wool, hides, and skins, supply the means of purchasing foreign goods. Kaoliang and millet are grown for home consumption; the former supplies food for man and beast and is used for fuel and thatching. Other products of importance are beans, peanuts, hemp, straw braid, barley, upland rice, tobacco, and maize (of which a poor quality is especially cultivated, though it is the staple food). Wheat and barley are sown at the end of autumn or early spring and harvested in summer. Millet, kaoliang, beans, maize, cotton, peanuts, etc., are sown in spring and harvested in autumn. In growing wheat, kaoliang, and cotton, three crops can ordinarily be produced in every two years.

Horses, mules, donkeys, and oxen are the farm animals, and in order to utilize the surplus corn and bran, other domestic animals, such as cattle, sheep, goats, pigs, and fowls. are raised. The camel is also used as a beast of burden.

PREVAILING METHODS—DIFFICULTY OF CHANGE.

The present methods of agriculture deprive the soil of humus. There is no crop rotation. This condition is aggravated by the continual raking away of the stubble for fuel, thus depriving the soil of organic matter, while the scarcity of animals makes the price of manure prohibitive. The use of night soil, procured in the cities and carried to the farming districts, is the only method adopted for keeping the soil productive. These statements are proved by the conditions in any part of Chihli; the yields of kaoliang and millet have decreased within the memory of man, the soil is noticeably depleted of humus, and manure is dear. The difficulty of change in the methods of agriculture will remain, even when the problems of transport, flood prevention, etc., have been solved. The necessary changes may be summarized as follows:

(*a*) Rotation of crops should be introduced, so that nitrogen-consuming crops may be succeeded by nitrogen-producing crops; and deep and shallow crops should alternate.

(*b*) Animal husbandry should exist; pigs, sheep, cattle, and horses should be bred, in order that they may consume the grass crops of the farms and the by-products of the crops.

(*c*) There should be improved methods of tillage; this involves the supersession of the inadequate native instruments by modern ones.

(*d*) Afforestation is imperative, in order to check soil erosion, wind driftage, and the silting up of navigable rivers.

Before these objects can be attained modern methods will have to be adopted, and these can come only with the complete education of the people. This is a task of great difficulty in China, since modern agricultural education presupposes a prior elementary education which not one farmer in ten thousand possesses.

INSTITUTIONS FOR PROMOTION OF AGRICULTURE.

During the last decade and a half the provincial government has expended a considerable amount of money in establishing institutions to foster agriculture and forestry in Chihli. Agricultural experiment stations, agricultural schools, forest-tree and fruit nurseries, and subordinate experiment farms were organized. Owing to various causes, these are now either closed or suspended. In 1904 the General Bureau of Agriculture was instituted at Paotingfu. Later, the Higher Agricultural School, from which 60 students have graduated, was also established there. To this school there is attached an Institute of Forestry, from which 200 students have graduated in forestry and sericulture. These graduates have been sent to all parts of the Province to promote interest in, and knowledge of, these subjects. An experiment station, in conjunction with the Institute of Forestry, contains sections for sericulture, horticulture, forestry, and industrial arts, in which practical training on modern lines is given. In Tientsin the Peiyang Government Nursery, subsequently termed the Tientsin Agricultural Experimental Station, has been established. It possesses about 250 acres, is well equipped with buildings for farm work, and has classrooms and dormitories for 60 students. It was also well stocked with foreign cattle, sheep, and swine. It suffered much from having no one plan of management. From this institution sprang the Cotton-growing Improvement Society, which, experimenting with long-stapled cotton, has done much to improve the production of cotton in the Province. The General Bureau of Agriculture has laid out a nursery at Tsinghaihsien, where 9,000 Japanese mulberry trees were planted, from which 3,000,000 young plants have been raised. Agricultural experimental stations have also been established throughout the Province.

FRUITS AND VEGETABLES GROWN.

Practically all the fruits common to the north temperate zone are to be found in this district, among others the peach, pear, apricot, apple, plum, grape, jujube, and persimmon. Other valuable products grown there are walnuts and chestnuts. The best fruit of the district comes from the Changli Hills in eastern Chihli near the gulf coast. The Changli pear is particularly prized for its good taste. Many of these fruits are exported, large quantities being sent away every year by steamer or by junks to various places along the coast. Also, American missionaries have successfully transplanted in the district American apples, pears, peaches, cherries, plums, grapes, strawberries, raspberries, and blackberries.

The ordinary garden vegetables are raised in abundance. The most important is the cabbage. Next in importance come onions, turnips, carrots, potatoes, sweet potatoes, egg plants, garlic, leeks, spinach, and peas. Many varieties of gourds, cucumbers, and melons are also cultivated. The asparagus plant is common in a wild state. The climate and soil are admirably adapted for the cultivation of foreign vegetables and flowers, and these may be grown throughout the warm season.

Forests of pines and oaks occur in the north of the district, but as a rule the mountains contain only here and there small woods, composed for the most part of low pines. On the plain along the streams, and in the vicinity of villages, clumps of pines, willows, poplars, and elms are common. The acacia does well in sheltered spots.

METHOD OF HANDLING PRODUCTS FROM THE INTERIOR.

The market in the interior for the staple agricultural products is practically in the hands of a few wholesale dealers, who bring all that reaches this market from the interior and then sell to foreign merchants. They dispatch agents to the places of production to arrange for the purchase, shipment, and disposal of the produce. Contracts are sometimes made on the basis of one-third of the purchase price being deposited, but usually business is transacted on a cash basis, the cargo being delivered after seven or eight days from the date of the order, and payment being effected after weighing. A commission of 2 per cent is given to these agents by the wholesale dealers. Such monopolies can not but be detrimental to producers and foreign merchants alike, and there is a desire among growers to enter into direct transactions with the foreign buyers. By the increased use of outward transit passes ("sanlientan") for the purchase of goods in the interior, foreign merchants are enabled to deal directly with the producers, so that the practice of buying through a select set of merchants is not as general as it was formerly.

DESTINATION OF PRINCIPAL ARTICLES.

Large quantities of sheep's and camels' wool, goat and sheep skins, and cow and horse hides are exported abroad, mainly to the United States and Europe. Raw cotton is shipped to Japan, Shanghai (for transshipment abroad), America, and Hongkong. Eggs, beef, and poultry are sent to Russia, while walnuts, peanuts, seeds, hemp and jute fibers, and straw braid go to America, Great Britain, and France. Bristles and sheep and pig intestines also enter into the export trade. They are destined principally for the United States and Europe.

MINERALS AND MINING.

The latent mineral resources of this district are believed to be considerable, but, with the exception of a few foreign and joint foreign and native enterprises, no serious attempts have been made to develop them. Chihli is rich in mineral products. According to a report of the chief engineer of the Mining Bureau, the mineral area of the Province may be divided into two parts—inside and outside the Great Wall. Of the minerals produced outside the Wall the most important is gold, which is found in veins and as detrital deposits. The best gold of the former description is mined in many places in the Kienping and Lwanping districts of Chaoyangfu, and that of the latter description is found in Pingchuanchow. Silver mines are in Fengninghsien and Pingchuanchow. Copper and lead are also found in the latter place. Iron is mined at Taokow, near Kaoszetai. Miaoerling, on the Luanho, produces the best bituminous coal, and Tungyuanpaoshan, in Chihfengchow, is noted for its anthracite. Within the Wall the most notable gold mine is at Tsienanhsien, in Tsunhwachow. Silver is mined in Maoerhkow, copper and lead in Linyuhsien, in the same district, and zinc in Chinghsing, at a place 7 miles distant from the colliery. The principal iron mine is in the north of Fengjunhsien.

Anthracite coal is worked at Sining, Weichow, Kimingshan, and Mentowkow. The Kaiping and Lanchow collieries are the most important mines from which bituminous coal is produced, and Chinghsing, Lincheng, Tzechow, Simentsai, and Lingshan are places noted for the production of coal of the same class. The Chinghsing colliery is worked by a joint company of Chinese and Germans, and produces from 500 to 600 tons of anthracite coal per day. Since China entered the war this company has been nominally under Chinese control. The Lincheng coal mine is also under joint management, Chinese and Belgian, and from both old and new pits about 300 tons of coal are extracted daily. The Kailan Mining Administration, which is an amalgamation of the Chinese Engineering and Mining Co. (Ltd.), a British firm, and the Lanchow Mining Co., a native concern, is the premier mining enterprise in China. The administration is under British control and management. It has a capital of £2,000,000, with a further sum of £1,200,000 in 6 per cent debentures. The concession lies in the Kaiping district, Chihli, and has an area of 95 square miles. The mines are served by the Peking-Mukden Railway, and are 81 miles from Tientsin and 89 miles from the port of Chinwangtao. The export of Kailin coal through Chinwangtao amounted to 1,442,465 tons in 1917. The amount shipped to foreign countries aggregated 700,000 tons (over half of which went to Japan and the remainder chiefly to Hongkong, the Philippine Islands, and Chosen), while 568,000 tons were sent to Shanghai and the remainder to 17 other Chinese ports. The administration has introduced all the latest methods for loading coal into its ships in the harbor. Berthing can take place at night, so that work can start at once. There is accommodation for some 3,000 coolies, and coal can be loaded at a rate of more than 12,000 tons in 24 hours. Chinwangtao now ranks as the premier port in the Orient for the shipment of coal, its export being larger than that of any port in Japan and equal to three times that of Hungay, in

Tongking. The total sales of coal mined by this company for the year ended June 30, 1918, amounted to 2,766,873 tons. The daily output averages 14,500 tons. The administration also manufactures fire bricks. The factory, which is located at Tangshan, is equipped with milling and other machinery of the most modern design. The present output is between 40,000 and 50,000 tons per annum, which amount could, if necessary, be increased to 100,000 tons per annum without any extension to the milling machinery.

There are a number of mines worked jointly by the Government and the people, of which the most important are those of the Tzechow Coal Mining Co. in Tzechow and the Fengkiakow gold mine in Miyunhsien; and there are also many mines worked by the people in a primitive way and on a small scale.

Shansi is considered to be the richest Province in coal, the coal-bearing area of one district alone comprising, it is said, 690 square miles. While the coal exists in abundance, another advantage is afforded in the ease and cheapness with which it can be extracted on a large scale. There are several mines where the finest lump anthracite, apparently equal to the best Pennsylvania, is sold at the pit head at 25 cents per ton. Gold, silver, lead, sulphur, gypsum, agate, iron, copper, and petroleum are also found in Shansi.

Other mines in this district, either under Chinese control or under joint Chinese and foreign control, are the To Li coal mine, 15 miles southwest of Peking, under Chinese control; the Tung Hsing and Yu Mao coal mines, both at Mentowkow, under Sino-British control; the Pao Chin coal mine, at Pingtingchow, eastern Shansi, on the Changting-Taiyuan Railway, under Chinese control; and the Liu Ho Kow mine, near Chengtehfu, Honan, under Chinese control.

The Pekin Syndicate concession at Chiaotso, Honan, was formerly under the sole control of British capitalists, but recently Chinese have been included, and upon amalgamation with the Chung Yuan Co., in June, 1915, the name was changed to the Fu Chung Corporation. The corporation has a nominal capital of $1,000,000, subscribed equally by the syndicate and the company, which are also represented equally on the board of management. The present sales of this concern amount to more than 1,200,000 tons per annum.

In all of these mines foreign methods have been adopted, and the machinery and plant used have been imported from Europe and America.

The output of coal in this district is estimated at about 25,000 tons per day; it is consumed locally, distributed to neighboring districts and other ports of China, or else shipped to other countries in the Orient.

A grant of the exploitation of the oil resources of Shansi and Chihli had been made to the Standard Oil Co. of New York by the Chinese Government, but the project was discontinued after trial operations had shown that oil did not exist in marketable quantities.

The Chinese Government, realizing that Chinese capital is inadequate to develop the mineral resources, invites foreign capitalists to share in such development. However, the mining regulations drawn up by the Government discourage rather than encourage foreign investors, inasmuch as they contain, among others, restrictive provisions to the effect that mining concessions can not be granted solely to foreigners, that foreigners can not hold an amount in excess of 40 per cent of the total capital invested in any enterprise and that a foreigner engaged in mining must, so far as the particular project is concerned, submit to Chinese jurisdiction. Applications for mining permits are made to the local bureau of mining affairs, at present a part of the provincial treasury. The sanction of the Ministries of Finance and of Agriculture and Commerce is necessary to the granting of a permit.

The mines under Chinese control are being operated under permits, for which a fee of 50 taels is charged. There is an additional charge of 0.60 tael a mile to cover traveling expenses of the deputy dispatched from Tientsin to inspect and to ascertain whether there are objections on the part of the people of the locality to the granting of permission to commence operations. The mines worked by Chinese companies seldom have a capital exceeding 10,000 taels; modern machinery is not employed, and the methods are very primitive.

Wolfram, some of it showing an assay test as high as 61.74 per cent, has recently been discovered in the northeastern part of Chihli Province, in the vicinity of Tangshan. It is reported that the area is rather large and extends from Chienanhsien to Funing and beyond. The central Government has assumed control of the mining operations, and the Ministry of War has established a bureau of administration at Lanchow, which plans to start a large refinery there in the near future. Up to the present time the greater portion of the wolfram mined has been used by the Government arsenals, and permission to work the mineral deposits is granted to Chinese only. Recently, however, several small shipments have been sent to America and to Japan.

COMMUNICATIONS: GENERAL INTRODUCTION.

The territory comprised in this district is, compared with most sections of China, fortunate in its transportation facilities, as regards railways, waterways, and roads. Practically every city of importance in the district is located either on a river or a railway, or both. The highways, while out of repair, are old trade routes and the traffic over them is still of great value. Likewise, the waterways serve a useful purpose in affording a means for bringing the products of the hinterland to the sea or to the railways, and for carrying foreign goods into the interior. But it is the increased facilities for railway transport that have contributed most to the improvement in the trade of this district. Goods that formerly had to be carried all the way to Tientsin by canal, cart, or boat, with the innumerable delays and probability of damage or loss inseparable from such means of conveyance, are now carried by the old methods only as far as the railway station nearest to the locality of their origin, and thence are forwarded by train to Tientsin, saving many days and with greatly reduced risks. That the railways have absorbed the greater proportion of the trade, to the detriment of the waterways, which have declined in exact ratio as traffic by rail has increased, is shown by the following percentages of rail, water, and land borne goods: Railways, 68 per cent; waterways, 28 per cent; and land routes, 4 per cent.

The Provinces that are generally considered to be the commercial sphere of Tientsin are Chihli and Shansi, parts of Shantung, Honan, Shensi, and Kansu, comprising an area of 522,260 square miles, in addition to Mongolia, which brings the total up to 1,890,000 square miles, containing a population estimated at 122,000,000. Some deduction from this commercial sphere must be allowed for contributions drawn by Yangtze ports.

WATERWAYS.

None of the rivers, except the Haiho from the sea to Tientsin, is navigable for ocean-going vessels, but all the streams are of some importance in affording distribution facilities for the trade of the district. However, the waterways of the district generally are in a deplorable condition. With the sole exception of the lower reaches of the Haiho, they have been allowed to lapse into such a condition that the deepening of the canals and rivers by the process of building dams has at times to be resorted to in order to obtain sufficient water for the junks detained at certain points to pass the more shallow places; and this work has to be done by the junk people themselves.

Four rivers, Yunliangho, Putoho, Hunho, and Peiho, draining the larger part of Chihli and part of Shansi, join above Tientsin to form the Haiho. On these rivers or their branches are situated the important cities of Tientsin, Peking, Paotingfu, Chengtingfu, and Hsuanhwafu. Chengtehfu (Jehol) is on the Luanho, which drains northern Chihli. An important waterway is the Grand Canal, extending from Tientsin to Hangchow in Chekiang Province. The Grand Canal, which joins the Peiho at Tientsin under the name of Yüho, is in reality nothing but a continuation of the Wei River, from which it derives practically all its water, traffic, and importance as a trade route. Beyond Lintsing, where it is joined by the Wei River, the Grand Canal is dry and useless, but this condition does not affect Tientsin trade to any material extent. It is important to note that the Wei River connects Tientsin in almost a straight line with the heart of Honan Province and with the southeastern boundary of the mineral and coal fields of Shansi.

And because of the fact that water-borne trade in heavy and bulky goods is usually able to hold its own against railway competition, serious attention should be given to the most important of Tientsin's natural inland communications, especially as there is a gradual deterioration in the value of the Wei River—Grand Canal—as a trade route. Ten years ago boats of 80 tons capacity could make sure of reaching Taokow, 550 miles from Tientsin, in proper season. At present only boats of 20 to 30 tons can do so, and then only during four or five months of the year. At other times repeated transshipments must take place. Formerly the fleet of Honan boats were known to make 3,000 trips a year. In 1905 this number dropped to below 2,000, and continued to decrease until, in recent years, the number further dwindled to 1,500 or 1,600. These boats bring various produce, including important Tientsin export staples. Salt is the principal article of return freight; even that article is also partly sent to Honan by rail. The main cause of the deterioration of this waterway is silt. The Yüho is subject to a freshet every year during the summer months, when it brings down the reddish Honan soil of loess origin. Another source of trouble is the sand blown into it; and there should be no great difficulty in coping with these adverse influences. An American engineering concern has the contract for draining a portion of this canal with a view to improving its navigability.

Transportation by water is very cheap but at the same time very slow, so that the railways carry most of the trade of the districts they touch. Bulky goods of nonperishable character, however, continue to be transported by water. All goods, foreign and native, on the interior waterways, even though covered by a transit pass, are subject to internal taxes, likin charges being levied at the numerous barriers en route and at the point of destination.

RAILWAYS.

Railways constitute the leading means of communication in this district. There are six distinct lines, which with their connections touch nearly every city of importance. They are known as the Government Railways of North China, and are directly under the Ministry of Communications at Peking. The various lines are the Ching-Feng, or Peking-Mukden, Railway; the Ching-Han, or Peking-Hankow, Railway; the Cheng-Tai, or Shansi, Railway; the Tao-Ching, or Peking Syndicate, Railway; the Ching-Sui, or Peking-Suiyuan, Railway; and the Chin-Pu, or Tientsin-Pukow, Railway. Of these, only the Peking-Mukden and the Tientsin-Pukow lines come to Tientsin, and it is only by direct or indirect connections with these two railways that the others become contributors to Tientsin trade.

PEKING-MUKDEN RAILWAY.

The Peking-Mukden line enters the district at Shanhaikwan and runs to Peking via Chinwangtao, Taku, and Tientsin. One of the original sections of the railway extended between Tientsin and Peking; this section was opened in 1897 and double tracked in the following year. The portion of the line between Tientsin and Newchwang was constructed by British capital under a loan agreement concluded October 10, 1898, between the Chinese Government and the British & Chinese Corporation. This corporation is a syndicate formed by the Hongkong & Shanghai Banking Corporation and the firm of Jardine, Matheson & Co. for promoting British interests in China. The main line was completed in 1903 and has a mileage of 522 miles, with one branch in this district, namely, from Peking to Tungchow, 12 miles. This line, which is the most important of the Chinese-owned railways, has been very prosperous and demonstrates the remarkable earning capacity of railways in this region. The Government devoted part of the earnings of this line to the building of a trunk extension, the Peking-Kalgan Railway, the construction of which began in October, 1905, and the opening of which took place in September, 1909, with a mileage of 124 miles. This line was later extended to Suiyuancheng, in northwestern Shansi, via Tatungfu, 220 miles, and was opened in September, 1915.

The Peking-Mukden line makes connection at Lukowkiao, 4 miles from Peking, with the Peking-Hankow Railway for Hankow and Yangtze ports as well as intermediate points reached by the Cheng-Tai and Tao-Ching lines. Connection is made at Fengtai with the Peking-Suiyuan line. At Tientsin a junction is effected with the Tientsin-Pukow line for Tsinanfu, Nanking, and Shanghai. The

Peking-Mukden line connects at Mukden and Newchwang with the South Manchuria Railway, which is in turn linked with the Trans-Siberian route and the Imperial Japanese Government Railways. Owing to the suspension of the express train service between Europe and the Orient, the express trains on this line have been discontinued.

The head office of the Peking-Mukden Railway is at Tientsin. The telegraphic address is "Kinfeng, Tientsin."

During the year 1918 the total net revenue of the Peking-Mukden line was $13,950,384 Mex., an increase of $3,483,710 Mex.[1] over the figures for the previous year.

To replace rolling stock and to provide extra equipment for future business, the Peking-Mukden line has contracted with American firms for the supply of 14 locomotives and 500 cars of 40 tons capacity delivery of which is expected during the summer of 1919. These 14 locomotives, as well as 4 others ordered for the Lunghai line (the northwestern trunk system connecting Ili with the sea) are of the Mikado type and of Continental design, to meet the requirements of European engineers employed on these railways.

[Other orders for American locomotives placed during 1918 are: Tientsin-Pukow line, 10 of the Mikado type; Peking-Suiyuan line, 5 of the Mikado type and 3 Mallets; Taokow-Chinghua, or Honan, line, 2 of the Mogul type; Shantung Railway (Tsingtau to Tsinan), 9 consolidation locomotives; Lincheng coal mines, 1 locomotive of the industrial type. The 30 locomotives last mentioned are of strictly American design. An American concern dealing in structural steel products has recently obtained, through its China agency, an order from the Peking-Hankow line for 80 bridges, and from the Peking-Suiyuan line for 5,000 tons of rails.]

PEKING-HANKOW RAILWAY.

The Peking-Hankow Railway was constructed by a Franco-Belgian syndicate under a series of loan and operating contracts signed in 1897 and 1898. In this syndicate the Belgian share was 40 per cent. While nominally the railway was a Belgian concession, actually French interests dominated the line. Moreover, Russians participated in the project, the Russo-Chinese Bank having charge of all financial arrangements. The loan was redeemed in 1908, and the line reverted to Chinese control on January 1, 1909. The line was formally opened in November, 1905, when the first train crossed the Yellow River bridge. The length of the line is 755 miles, with the following branches in the Tientsin consular district: Liangsiang-Tuli (to coal mines), 12 miles; Liuliho-Chowkweichwang (to coal mines), 10 miles; Kaoyihsien-Lincheng (to coal mines), 10 miles; Paotingfu branch, 3 miles; and Kaopeitien-Hsiling, 26 miles. The Hsiling road, 79 miles from Peking, establishes communication with the western Imperial Tombs; its construction was completed in 1904, and its cost was about $600,000. The Tungkow Railway is a special line for mining purposes, which runs for a distance of about 90 miles; its cost of construction was about $3,000,000.

The Peking-Hankow line connects with the Cheng-Tai line at Shihchiachwang, and with the Tao-Ching line at Sinsianghsien.

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[1] See footnote on p. 84.

The important cities of this district located thereon are Peking, Paotingfu, and Chengtingfu.

The head office of this line is at Peking. The telegraphic address is "Kinhan, Peking."

CHENG-TAI, OR SHANSI, RAILWAY.

The Cheng-Tai, or Shansi, Railway joins the Peking-Hankow line at Shihchiachwang, near Chengtingfu, about 50 miles south of Paotingfu, from which junction it runs westward to Taiyuanfu, the capital of Shansi. This line, which was constructed by French engineers and financed by French capitalists, was provided for in a preliminary loan agreement signed with the Russo-Chinese Bank in May, 1898, and a final agreement with the same institution ratified by imperial decree in September, 1902. The total amount of the loan was 40,000,000 francs, and 6,106,000 taels was advanced by the board of communications. The line brings the rich Taiyuanfu Valley into touch with Tientsin and Shanghai by its junction with the Peking-Hankow Railway. The total length of the line is 151 miles; it is of 1-meter gauge. Construction work was begun in 1904 and the road was opened for through traffic in September, 1907. Its construction was difficult, including several tunnels, some over 1,000 feet in length. At one place the railway rises 3,000 feet above the plains. At Taiyuanfu it forms a junction with the projected Northwestern Grand Trunk system, part of which has been built. This part, the Taiyuan-Pingyao section, 40 miles in length, was begun in September, 1910, and was opened early in 1912.

The head office of the Société Française de Construction et d' Exploitation de Chemins de Fer en Chine is at 9 Rue Chanchet, Paris; in China the headquarters are at Shihchiachwang.

The Peking-Hankow Railway administration acts at times as purchasing agents of the Cheng-Tai line.

PEKIN SYNDICATE, OR TAOKOW-CHINGHUA, RAILWAY.

This railway was constructed under an agreement signed in May, 1898, between the Shansi Bureau of Trade and the Pekin Syndicate. This syndicate was registered on March 27, 1897, in London, for the purpose of obtaining and developing concessions for mining, railway, and other undertakings in China. It was originally organized by British and Italian financiers with a capital of £20,000, which was later increased to £1,520,000. The British interests now practically dominate the syndicate. The agreement permitted the syndicate to work coal and iron mines in five different places in Shansi Province; and in June, 1898, a native company signed with the syndicate an agreement on similar terms for mining in Honan Province north of the Yellow River. These agreements stipulated that the syndicate would be permitted to build a railway connecting the mines with a main line or with water navigation. In June, 1902, permission was obtained to build a railway from Pashan, near Chinghua, to Taokow, a port on the Wei River. The length of the line is 96 miles, with a branch line of 7 miles. This line, which cost more than $3,000,000, was opened to traffic in July, 1904. In June of the following year it was made over to the Chinese Government, the operation for a certain period being left in the hands of the syndicate, which receives 20 per cent of the net profits each year. The line was originally not a loan-built road, as the loan was contracted, after the completion of the road by the syndicate, to buy out the syndicate's absolute control of the line. This road was constructed primarily to bring the product of the anthracite coal mines worked by the syndicate to Taokow, whence it is carried to Tientsin. The line crosses the Peking-Hankow Railway at Sinsianghsien, and secures an all-rail route to Peking and to Tientsin for its coal. The syndicate afterwards surrendered its mining rights in Shansi to the Chinese Government on being paid 2,750,000 taels.

The head offices of this line are at Peking and Chiaotso, Honan. The managers and administrators are the Pekin Syndicate (Ltd.).

PEKING-SUIYUAN RAILWAY.

This line runs from Fengtai to Suiyuan via Peking, Nankow, Hsuanhuafu, Kalgan, Tatung, Fengchen, and Kweihwating. Up to Nankow the road was easily constructed; through the Nankow Pass there was much engineering work—viaducts, tunnels, and heavy grades; beyond that point the road leads over easier plateau ground to Kalgan. Beyond Tienchen, 55 miles from Kalgan, much difficulty was experienced in spanning the rivers with their rocky beds. West of Tatung the line traverses many mountain ranges and rivers, which made that section most difficult from the engineering point of view. This is the only railway in the district built with Chinese capital and by Chinese engineers; the cost of construction amounted to $10,000,000. This picturesque line, the road to the Great Wall, follows the ancient caravan route and military highway from Mongolia into China by way of the historic Nankow Pass, and connects Peking and Tientsin with Hsuanhuafu and Kalgan in Chihli, and with Tatungfu and Fengchen in Shansi, tapping the rich mineral district of northern Chihli and Shansi. From the old frontier mart at Kalgan the camel caravans set out on their journeys across Mongolia to Siberia and central Asia. The hides, wool, and furs of Mongolia reach the trade by this route, and the new railway will do much toward the development of that vast region. It is hoped eventually to extend the line to Urga and Kiakhta (750 miles from Kalgan) and to connect with the Trans-Siberian Railway. A branch line—Peking to Mentowkow, 16½ miles—for coal mines, was opened to traffic in 1908.

The head office of the Peking-Suiyuan Railway is at Peking. The telegraphic address is "Kalganry, Peking."

TIENTSIN-PUKOW RAILWAY.

In 1898 Germany and Great Britain secured jointly a concession for constructing the Tientsin-Pukow Railway. In May, 1899, the preliminary negotiations for financing, constructing, equipping, and operating the line were completed. In 1900 the Boxer uprising suspended further progress. On January 13, 1908, the final loan agreement was concluded between the Chinese Government and an Anglo-German syndicate, and the laying of the line was inaugurated on June 30 of that year. For the first time in the history of railway loans in China, the principle of joint foreign and native management was abandoned and the construction and control of the road vested entirely with the Chinese Government. The total mileage from Tientsin to Pukow is 626 miles. The northern section—Tientsin, Tsinanfu, Taianfu, Hanchwang, 390 miles—built under German supervision, was opened in December, 1910. The southern section—Pukow, Linhwaikwan, Hsuchowfu, Likao, 236 miles—built under British supervision, was opened in November, 1911. The construction of the bridge across the Yellow River having been completed some time previously, the line was opened to traffic through its entire length on June 21, 1912. This line is the most convenient connection between Shanghai in Central China and Tientsin, Peking, Kalgan, Mukden, and the Siberian route in North China. Express trains equipped with sleeping and buffet cars run once a day each way between Pukow and Tientsin, connecting with the through service of the Peking-Mukden line.

The head office of this line is in Hopei, Tientsin. The telegraphic address is "Tsinpury, Tientsin."

There are no railways under construction at present in the Tientsin consular district.

RAILWAYS PROJECTED.

Of projected railways in this district the following are the principal ones:

From Chengtingfu to Techow, a distance of 110 miles, a line would serve to connect the Peking-Hankow and the Tientsin-Pukow Railways, and this was proposed by a German syndicate in 1913. Surveys had been completed at the beginning of the war.

Another line designed to link the two systems is the Tsinanfu-Shuntehfu railway, about 160 miles in length. It would pass through a densely populated agricultural section, connecting Tsingtau, through Tsinanfu, with the heart of north-central China.

The Tatungfu-Chengtu railway, also under agreement for future construction, will be approximately 960 miles in length. The portion of the line from Tatung via Taiyuan to Tungkwan is in the Tientsin consular district. From Tungkwan it will proceed to Sianfu, thence to Hanchungfu, and on to Chengtu. This railway is provided for in a loan agreement signed in July, 1913, with a Franco-Belgian syndicate. The concession includes running rights over the Tungkwan-Sianfu section of the projected central trunk line by which it is proposed to connect Ili with the sea via Sianfu.

Other projected lines in this district are the "Chihli Extra-Mural" railways: Peking-Jehol, 130 miles; Jehol-Chihfeng, 140 miles; Chinchow-Chihfeng, 190 miles; Kalgan-Dolon-nor, 190 miles; Dolon-nor-Chihfeng, 130 miles; Chihfeng-Taonanfu, 330 miles.

The decision of the Chinese Government to construct these lines was taken at the instigation of Japan. Preliminary surveys from Chinchow, on the Peking-Mukden Railway, via Chaoyang to Chihfeng, and from the latter place to Jehol via Pingchuan, a distance of 330 miles, are practically completed. It is proposed that the funds for these lines, whose total length will be approximately 1,110 miles, shall be derived from the surplus of the Peking-Mukden and the Peking-Hankow lines, but it is arranged that Japan shall have priority in the event of China's desiring to employ foreign capital to build these lines. The section between Chinchow and Chihfeng is the first to be undertaken. Construction work has been postponed until the end of the war.

TRAMWAYS.

The only tramways in this district are to be found in Tientsin. The tramway service of Tientsin was inaugurated in 1906 under the Compagnie de Tramways et d'Éclairage de Tientsin, a Belgian concern. The company was capitalized at 6,250,000 francs, one-half for street-car service and one-half for lighting purposes. The whole plant is under Belgian control and operation. The tramways, upon introduction and for a considerable time thereafter, were not well patronized by the natives. However, with the extension of the system and numerous improvements in its physical condition, the enterprise has become successful, but doubtless the principal factor contributing to this result was the reduction in fares. The daily receipts have been augmented until they now amount to about $2,000 Mex.

The power station and car barn are both located in the southwest corner of the native city. The administration office is in the former Austrian concession. There are four lines, each distinguished by the color of its cars. The white line runs around the city. The blue line begins at Peitakuan, traversing the Japanese and the French concessions, after which it crosses the international bridge and enters the Russian concession, terminating at the east railway station. The red line connects the same points by way of the former Austrian, the Italian, and the Russian concessions. The yellow line starts from Peitakuan and runs through the Japanese and French concessions, ending at the river bund on the French concession. Besides the above, a new line—the green—was opened for the special convenience of French missionaries; it runs in the western French concession for a short distance. All the lines are double-tracked. The total length is 13.18 kilometers, or 8.19 miles, and the gauge is 1 meter (39.37 inches).

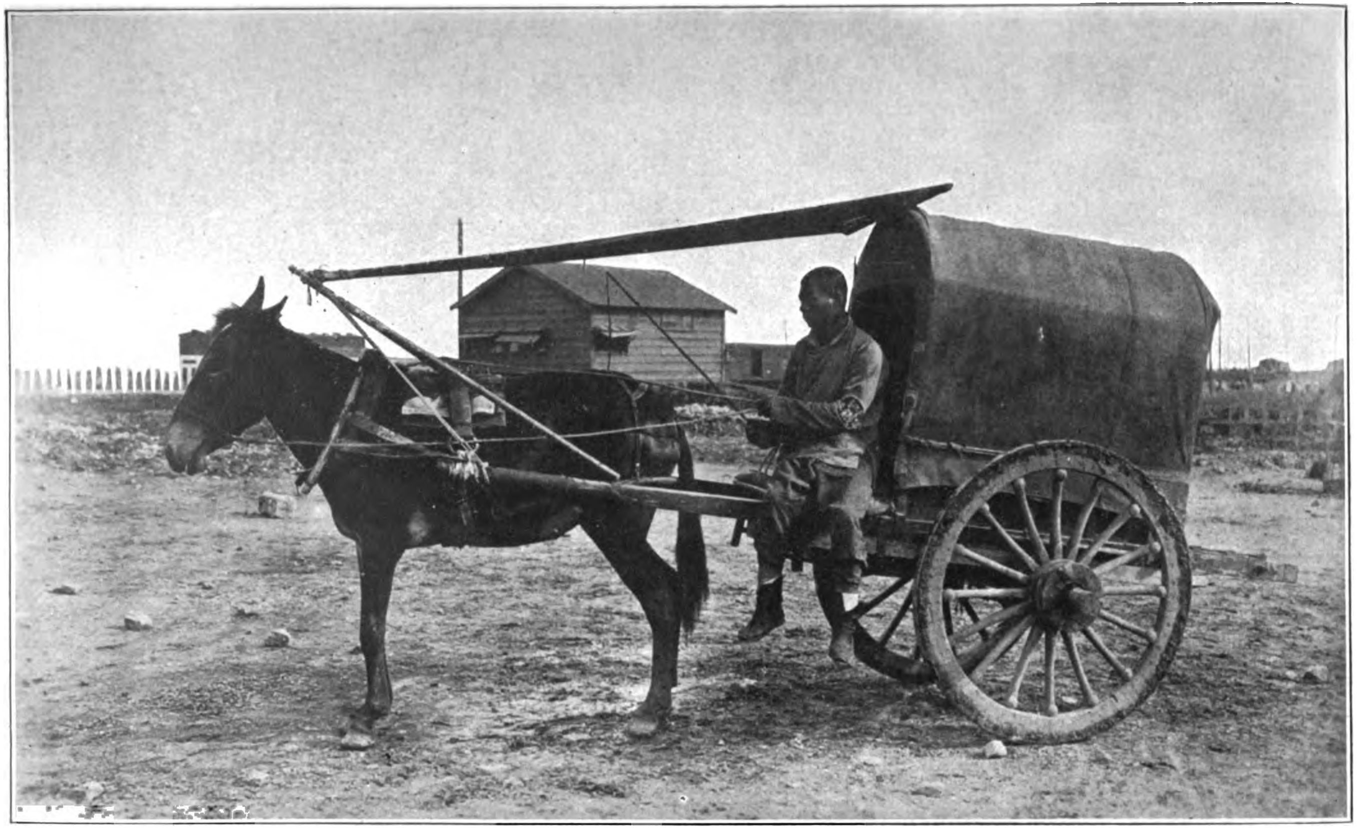
The rails weigh 46 kilos (101.43 pounds) per meter; there are 12 tie-rods for every 18-meter rail. No sleepers are used, the rails being tied together and laid in ballast, 18 inches wide by 15 inches deep. There are 64 cars, each of which is supplied with two motors, and in addition 50 trailers, making a total of 114 cars. Each car has 16 seats, and there are 10 places on each platform. All rolling stock and materials are of Belgian manufacture. The motormen and conductors are natives under foreign supervision.

The fare is 2 cents on one circuit (halfway around the city) and 3 cents on all other circuits, irrespective of distance.

A tramway system for Peking under joint Chinese and French management has been planned; and construction work, it is stated, will be commenced on the termination of the war.

ROADS.

After waterways and railways, roads constitute the principal means of communication in the district. They are, like most roads in China, very poor. From a commercial point of view they have been largely superseded by the railways. As nearly all of Shansi and western Chihli is covered with a deep deposit of loose yellow earth called loess, the roads in that region have worn to a depth sometimes as great as 50 or 100 feet. After heavy rains these roads become streams and therefore impassable. However, the poor roads of the district do not affect economic conditions as adversely as in some other parts of



Photograph by E. M. Newman.

FIG. 29.—SPRINGLESS CART, PEKING.

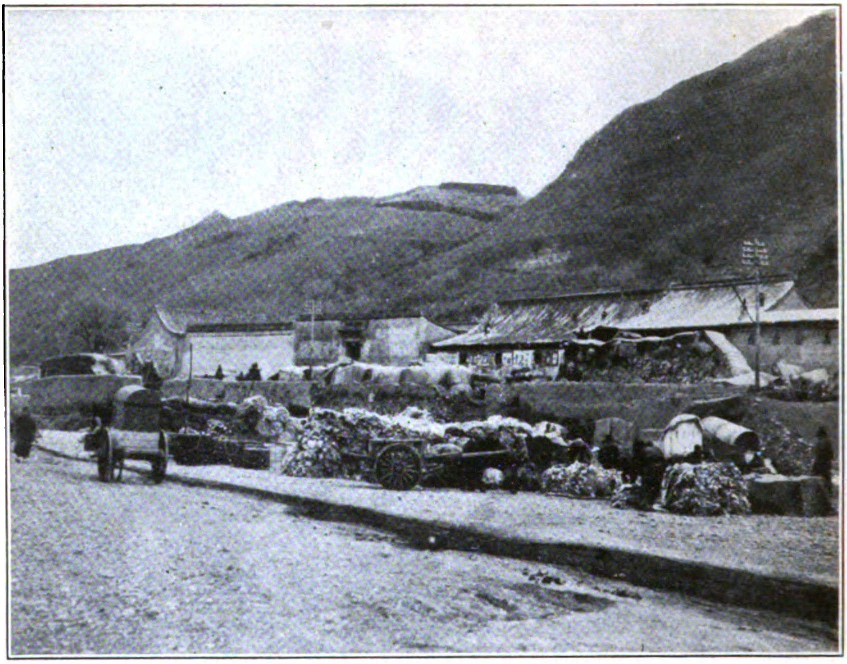


FIG. 30.—MONGOL "GODOWNS" IN PASS AT KALGAN.

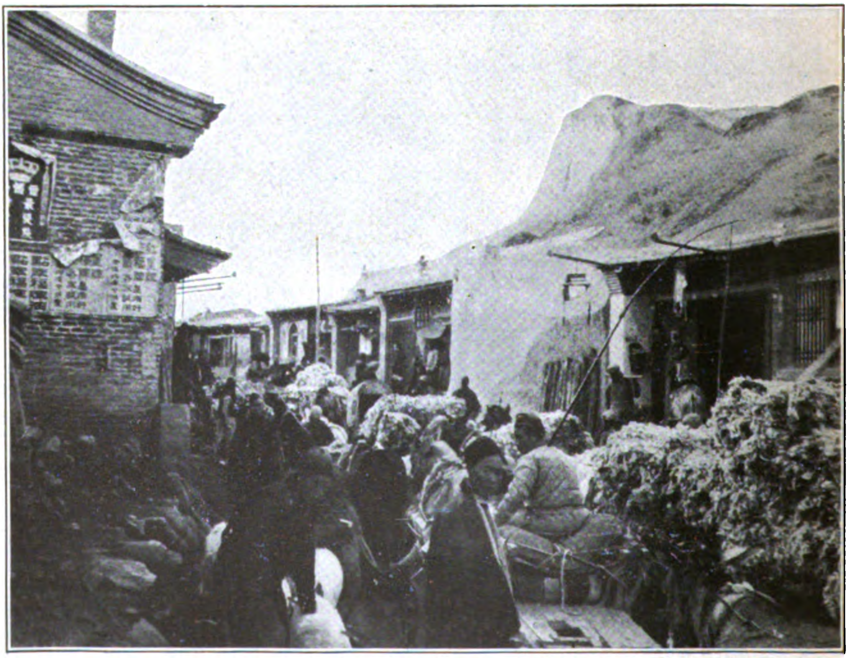


FIG. 31.—STREET SCENE NEAR LIKIN GATE AT KALGAN.

China, because of the reasonably good waterways and the comparatively large number of railways.

The principal roads that still play an important part in the trade of the district are:

(1) The road from Peking to Shanhaikwan, via Tungchow and Yungpingfu.

(2) The road from Peking to Dolon-nor, via Fengninghsien, traversing the Kupeikow pass.

(3) The road from Peking to Kalgan (and thence to Urga, the capital of Inner Mongolia), via Hsuanhuafu, traversing the Changkiakow or Kalgan pass.

(4) The road from Peking to Taiyuanfu, Shansi (and thence to Sianfu, Shensi), via Paotingfu and Chengtingfu.

(5) The road from Peking to Tsinanfu, via Hokienfu.

The road from Kalgan to Urga is still the route over which products to and from Mongolia must travel, and the Taiyuanfu-Sianfu road is one of the great arteries connecting the farthest limit of the railways inland with western China.

Transportation over the roads is by carts (known generally as Peking carts and drawn by ponies and mules), donkeys, and camels. On the road to Urga oxcarts also are much used.

The roads in Peking and environs suitable for motor traffic are about 45 miles in length, while there are about 10 miles of good roads in and about Tientsin. All these roads have been well built and are being maintained properly. A public highway from Peking to Tungchow, a distance of 13 miles, was completed during 1918. The sum of $200,000 was expended on the work, one-half being contributed by the Central Government and the remainder by the American Red Cross. It is planned eventually to extend this road to Tientsin, which would bring its total length up to 83 miles. At present the modern roads of this district total about 67 miles.

Attempts are being made to establish regular motor-car services between Kalgan and Urga across the region commonly described as the "Gobi Desert." No real desert is traversed by the road between these two centers. The most difficult part of the journey is through the rocky ravine, known as the Kalgan Pass, to the table-land at Hanaba, about 15 miles from Kalgan. Thence the road leads through farming country for 50 miles, and grazing lands continue the remainder of the way to Urga, except for a narrow strip of gravel waste land, the eastern spur of the Gobi Desert, which may be crossed by motor car in six or eight hours. Altogether the country is adapted for automobiles in dry weather, which prevails most of the year. The only rain comes with thunderstorms and showers in summer. In winter the temperature is below zero for four months and below the freezing point for almost six months, the cold being accompanied by high winds.

In recent times cars have frequently traveled between Kalgan and Urga, and during the past few years a limited amount of traffic has been carried by power vehicles, the journey taking between three and four days.

A concern called the Ta Cheng Motor Bus Co. has been organized, and, the project having been proved feasible, cars are running regularly from both Kalgan and Urga on the 5th, 15th, 19th, 20th, 25th, and 30th of each month, reaching their destinations in four days. Each car carries four passengers, who are allowed 30 pounds of baggage each, the fare being $120 for a single trip. There are intermediate stations where food and night lodging may be obtained.

The Peking-Suiyan Railway in March, 1918, made a preliminary trial of motor-car service over this route. Six cars were used, and the result is reported to have been satisfactory. It is intended to put additional cars on the run in course of time, so that there should soon be a considerable number of power vehicles operating between Kalgan and Urga. Hitherto merchandise has been hauled on bullock carts or carried on camels, taking up to 40 days to make the journey. The introduction of motor trucks will seriously affect this method of transportation, and motor vehicles are certain to be used as soon as the Chinese interested in the new enterprises are convinced that there is profit in them. Regular lines of freight and passenger carriers should soon be in operation. An American company has already inaugurated a motor passenger service between Kalgan and Urga. The distance between the two points is about 550 miles.

POSTAL FACILITIES.

Chinese postal establishments cover the whole of this district, and the constant extensions and improvements in the service are proving a great convenience to the native and foreign public. The amount of mail matter handled is constantly increasing, and the service is both prompt and dependable, while the charges are moderate. The post office affords adequate parcel-post and money-order facilities between the larger centers of population in the district. These services are entirely satisfactory and are being appreciated more and more by the Chinese. The improvements and extensions in the mail service have had much to do with the development of trade in the interior. An office has been recently opened at the central railway station, Tientsin, to facilitate the exchange of mails between the Peking-Mukden and Tientsin-Pukow Railways. The transmission of mail matter has been greatly expedited by the railway development that has taken place in this district during the past decade or more. The war has interrupted the Trans-Siberian service; previously mail matter by that route has reached western Europe in two weeks.

Foreign post offices are located in the following cities and towns of this district: British, at Tientsin; French, at Tientsin and Peking; Japanese, at Tientsin, Tangku, Shanhaikwan, and Peking; Russian, at Tientsin, Peking, and Kalgan; and German, at Tientsin and Peking. (The German post offices have been closed since the outbreak of war.)

The transmission of parcels between this district and the United States can perhaps be most effectively handled through the American post office at Shanghai, though parcel-post services with foreign countries are maintained by the Chinese and foreign post offices operating in the district. Though an arrangement for money orders between the United States and China has not been effected, the foreign post offices and banks serve this purpose admirably.

In normal times, the mails between the United States and this district are regularly received and despatched, but since the war delays often ensue. As a rule it takes about four weeks for first-class mail matter to reach this district from New York.

TELEGRAPHS.

Telegraphs were introduced into this district on December 24, 1881, the date on which the line from Shanghai to Tientsin was officially opened. In August, 1884, Peking was linked up with Tientsin and, about the same time the Shanghai-Tientsin line was extended to Shanhaikwan and Paotingfu. The land lines were operated by a native company under Government control until 1908, when the Ministry of Communications took over the service. The system at present extends to practically all cities and towns of importance in the district. While the telegraph service is modern and generally gives satisfaction, there is public complaint that the time taken for transmission of a telegram is often greater than is required for a letter sent by train or steamer, and that the tariff is too high. Both of these grievances grow out of the fact that official telegrams go free of charge and take precedence over all others.

The rates for telegrams in foreign languages are as follows: To stations in the same Province, 9 cents per word; to stations in other Provinces, 18 cents per word; press telegrams throughout China, 6 cents per word. The rates for telegrams in Chinese are: To stations in the same Province, 6 cents per character; to stations in other Provinces, 12 cents per character; press telegrams throughout China, 3 cents per character.

Direct telegraphic connections between China and the United States are through the Commercial Pacific Cable Co., whose line touches China at Shanghai. The rate per word charged at Peking and Tientsin for cablegrams via the Pacific to the eastern part of the United States is $1.60 and to San Francisco $1.50, local currency.

The telegraphic materials in use have been supplied by the various countries of northern Europe and America, but since the war they have mostly come from Japan. Recently a group of Japanese capitalists made a loan of 20,000,000 yen to China for the purpose of improving and extending the telegraph service. The terms of the loan contract stipulate, among other provisions, that Japanese advisers and technical experts are to be employed, that all materials are to be bought through Japanese agents, and that in the event of any further loans for the telegraph service Japanese financiers are to be given the option.

Realizing that the telegraph lines in the frontier Provinces are in urgent need of repairs and extensions, the Ministry of Communications recently proposed, and the Government approved, the construction of a number of lines, one of which affects this district—a line from Kalgan via Kweihua and Ninghsia to Kuyuan in Kansu, about 957 miles.

There are three wireless installations at Peking—one by the Chinese Government and one each by the American and Italian Legations. Also there is at Chinwangtao, under Japanese military control, a Marconi signal station with a mast 360 feet high.

TELEPHONES.

The telephone system in this district has been greatly developed in recent years. When first introduced, the telephone was patronized but little by the natives; now, however, it has proved itself to be as important a branch of communications as any other. The telephone is being widely used in all the cities and towns. Tientsin has the central telephone station of the Province, and Peking and Tangku are substations. The number of telephones in Tientsin is 3,800 and in Tangku 60, and their number is likely to continue to increase as time passes. Applications for installations are always in excess of the supply of instruments available. In June, 1914, an improvement was effected in Tientsin by the installation of a modern metallic-direct plant and the merging of three small exchanges into one building.

In Peking there are three telephone exchanges, the exchange known as the east office also containing the administration. The number of instruments in present use is more than 8,000. As the service is still not sufficient to supply the needs of the city, it is intended to install a new exchange. Details of the telephone systems of Tientsin and Peking are as follows:

Tientsin.—Chinese Government Telephone Administration; Chinese Government telephone system, with long-distance lines to Peking and Tangku; common battery system; address, Chinese Bund, Tientsin.

Peking.—Chinese Government Telephone Administration; Chinese Government telephone system, connecting with Tientsin and Tangku; common battery system.

Tangshan, Paotingfu, and Kalgan have telephone services owned and operated by Chinese private companies. The system in each is the magneto, nonmultiple. Besides, the railways in this district have their own telephone systems. These telephones are available to the public also on payment of a fee.

The quarterly subscription for one telephone in Tientsin is $18, and for each extension $6. The charge for conversation in one locality is $0.10 for five minutes, and with other stations $0.50 for five minutes within a radius of 40 miles. The charge for long-distance messages between Tientsin and Peking is $0.80 for every five minutes. The materials in general use have been purchased in the United States and Germany, but where old instruments and wires are used they have come mostly from Japan.

NEWSPAPERS.

The number of Chinese newspapers in this district has shown a remarkable growth in recent years. Though there is much in the native press that might be regarded as harmful to public and private weal, there is no doubt that open discussion and criticism and the publication of news are exercising a beneficial influence.

Following is a list of the leading foreign and Chinese newspapers published in Peking and Tientsin, together with the daily circulation of the Chinese papers:

Peking:
  Peking Daily News; British.
  Peking Leader.
  Peking Jih Pao; circulation about 5,000.
  Shuntien Shih Pao; circulation about 20,000.
Tientsin:
  North China Star; American.
  Peking and Tientsin Times; British.
  China Critic; British.
  China Times; British.

Tientsin—Continued.
- North China Daily Mail; British.
- L'Echo de Tientsin; French.
- Social Welfare; circulation over 8,000.
- L'Impartial; circulation over 6,000.
- Tientsin Daily News; circulation over 3,000.

The Chinese papers generally consist of eight sheets each, nearly half of the space being covered with advertisements. Besides local news, presidential orders, and important appointments, they publish news of China generally and the principal foreign telegrams. They also deal with exchange, markets, and commercial news. The daily leading article treats intelligently of current affairs of interest. The monthly subscription is 70 cents, and the price per copy is 4 cents.

The advertising rates of the vernacular newspapers may be given approximately as follows: One-half page—$1,000 for a year; $280 for three months; $100 for one month. One-quarter page—$500 for a year; $140 for three months; $50 for one month. Minimum—100 characters. One day—1 cent per character. 10 days—$\frac{3}{10}$ cent per character. 20 days—$\frac{2}{10}$ cent per character. One month—$\frac{1}{2}$ cent per character, for minimum of 50 characters. One year—same rate as by the month, except that only 10 months will be charged for the year.

PUBLIC WORKS AND SANITATION.

IRRIGATION PROJECTS.

Though there is an urgent need in this district for work of this character, irrigation in a modern sense has made very slight progress. The numerous waterways, instead of being conserved and utilized for irrigation purposes, have become a perpetual menace to the adjacent population in that any unusual amount of rainfall often causes them to burst their banks and inundate large areas of surrounding country. It is a problem how adequately to conserve the water supply with a view to increasing the agricultural possibilities of the district. To achieve satisfactory results the primitive irrigation methods now used by a section of the agricultural population will have to be replaced by modern ones, and the irrigation work now carried on must be greatly extended.

CONSERVANCY PROJECTS.

Closely connected with irrigation work is that of conservancy, whose main problem is the prevention of floods. The shortsighted policy of the past in denuding the land of forests has resulted in disturbing the regular flow of the streams. Apart from the excellent results obtained in the Peiho under the auspices of the Haiho Conservancy Commission, no noticeable improvement has been effected in any of the waterways of this district. No measures other than those relating to the Tientsin River have ever been taken to prevent floods, while those adopted for protection against floods have been of a temporary character and were not undertaken seriously. It is only to be expected, therefore, that the efforts so far expended in this work have been devoid of permanent beneficial results; they have only brought about an elevation of the river beds and other abnormal conditions which modern conservancy methods alone can remedy. Hitherto this work has been greatly hampered by lack of adequate and continuous Government support.

By the terms of article 10 of the peace protocol of 1901 the Chinese Government undertook to improve the condition of the Haiho River, and to this end it agreed to be represented on an international commission charged with the supervision of the Haiho Conservancy and to contribute 60,000 Haikwan taels every year toward the cost of operations.

Much progress has been made in the work connected with this conservancy. The river has been dredged and widened in various places with the object of affording a better channel for navigation. Abreast of the wharves at Tientsin the channel is being kept constantly dredged and has been widened so as to permit much larger steamers than formerly to reach the bund.

The question of deepening the channel at Taku Bar by means of a powerful suction dredger had long been kept in abeyance for lack of funds. As a provisional expedient, a method of raking the channel over the bar by means of a "rolling plow" was adopted in 1906, but this process did not produce more than a moderate and temporary improvement.

In 1909 the Chinese authorities and the diplomatic body sanctioned a scheme for the further improvement of the river and bar, involving the purchase of a suction dredger and a bucket dredger, which with tugs and other equipment, including labor, were to cost 870,000 taels. A loan to cover this expenditure was successfully floated. Revenue for meeting the interest charges and amortization of this loan as well as the continuance of the work was provided by a special tax of 4 per cent of the customs duties and a shipping tax of 0.10 tael per ton, or on ships not passing the bar at Taku 0.05 tael per ton, or 0.10 tael per ton on all cargo discharged or loaded. This tax is in addition to the sum of 5,000 taels contributed monthly to the conservancy funds by the customs. The principal work under the scheme was begun in May, 1911. The excavation was completed in October, 1912. The benefits derived from this cutting were the shortening of the river by 5.6 miles and the deletion of two bends. As a result of the shortening, the bed of the river fell considerably. The large quantities of mud and silt taken yearly from the harbor have been used in filling large areas in the French and German concessions and the British extra-mural concession.

In May, 1911, the Tientsin General Chamber of Commerce raised the question of keeping the port open in winter as far as Tangku by means of ice breakers. Two ice breakers were obtained in 1913 and one in 1914, and a channel 12 feet in depth at low water has been successfully maintained.

The Grand Canal Improvement Board, consisting of several Chinese directors and an American chief engineer as well as a number of assistant engineers, also American, began operations during 1918, and some preliminary surveys have been made. A loan agreement for $6,000,000 was concluded in 1917 by the Chinese Government with the American International Corporation for the improvement of the Grand Canal. The work is being undertaken by the Siems-Carey Railway & Canal Co., an American concern.

At one time the Chinese authorities entertained the idea of undertaking conservancy work on the Paotingfu River (Hsiho).

The question of conserving the waterways of Chihli Province, with a view to preventing disastrous floods and safeguarding the trade and shipping interests of Tientsin, has occupied attention for some years past, and various conservancy engineers have individually issued reports on the subject, but no coordinated scheme on broad lines and acceptable to all interests has hitherto been adopted. In the autumn of 1917, however, after the disastrous flood in September of that year when 15,000 square miles of territory between Paotingfu and Tientsin were inundated, destroying 80,000 villages and causing the loss of crops valued at $100,000,000, a proposal was made for the appointment of a joint commission to be composed of three representatives of the Chinese Government and three persons nominated by the Board of the Haiho Conservancy. It is called the Commission for the Improvement of the River System of Chihli. Its duty is first to study the questions involved and ultimately to submit recommendations for acceptance by the Chinese Government. The proposal was assented to by the Chinese Government and the commission is now functioning, its meetings being held in Tientsin. The problem is not alone to control floods, but also to insure an even and regular flow of water in the Haiho, which is deemed absolutely necessary if Tientsin is to maintain its place as a port of shipment.

MUNICIPAL WORKS.

Before the Boxer disturbances in 1900 Tientsin, in common with other Chinese cities, was deficient in municipal and sanitary arrangements; after that date, however, many improvements were effected in the whole of Tientsin, including both the Chinese city and the foreign concessions. In the foreign settlements, especially the British, French, Japanese, and German concessions, the marked development along municipal lines has caused these communities to rank with the best-ordered towns of the United States. Living conditions in the foreign concessions at Tientsin and in the Legation Quarter at Peking are all that can be desired. The streets are macadamized, well maintained and kept clean. There are adequate lighting, water, and sewerage systems. All the districts are efficiently policed. These features of the various municipalities are described in detail elsewhere under the appropriate headings. The measures taken for protection against fire are adequate. The fire brigades of the various concessions in Tientsin, composed of foreign volunteers, are very efficient. They are equipped with modern fire-fighting apparatus.

In the Chinese city of Tientsin radical improvements have taken place. The police administration has been improved, lawlessness has been diminished, schools, hospitals, and prisons have been established, fine government buildings have been erected, a large park has been laid out, and improved roads have been constructed. The city wall built in 1405 has been removed and the base now forms a splendid roadway. The streets have been straightened and in many places widened. Tramways have been introduced and electric-light, telephone, and water systems installed. There is a fire department under police control, besides numerous volunteer fire brigades. Sewers have been constructed, but a modern system of drainage has not yet been introduced. While many of the main streets have been reconstructed and remetalled, the lanes and by-streets as a rule remain unimproved. There are several large and well-managed slaughterhouses. Many of the large ponds, so common in the suburbs of all Chinese towns, are being gradually filled in.

Commercially Tientsin has suffered severely as a result of political unrest and floods, but it has always rapidly recovered and still continues to be the model city in the Republic. It is interesting to record here that in many steps toward improvement in matters of public convenience, and in social, educational, sanitary industrial, and commercial methods, as well as in the introduction of local municipal self-government, Tientsin has been made an experimenting ground for the nation.

Peking has likewise witnessed many physical improvements since 1900. They are similar to those described with reference to Tientsin. In the other cities and towns of the district the development along municipal lines has been less marked. While the changes therein are few in number and occur gradually, nevertheless real progress is being made.

PUBLIC-SERVICE COMPANIES.

LIGHT AND POWER PLANTS.

Practically all the cities and towns of this district are supplied with electric lighting and power plants. A description of the companies in the various centers follows:

TIENTSIN.

The Tientsin Gas & Electric Light Co. (Ltd.) supplies electric light to the British concessions. The current is 440/220 volts, direct. The company is owned and operated by foreigners. The general managers are William Forbes & Co., Tientsin.

L'Energie Électrique de Tientsin supplies electric light to the French concession. The current is 5,000/220 volts, 3-phase, 50-cycle, alternating. The company is under French management.

The Japanese Electric Lighting Co. supplies electric light to the Japanese concession. The current is 2,300/110 volts, 3-phase, alternating. The company is under Japanese management.

The Tientsin Tramways & Lighting Co. (Ltd.) supplies electric light and power to the native city of Tientsin and the Italian, Russian, Belgian, and former Austrian concessions. The current is 5,000/220 volts, 3-phase, 50-cycle, alternating; it also supplies 550 volts direct current, the latter for furnishing power to the tramways. This company has in operation two 1,500-kilowatt turbines, and has recently ordered one 3,500-kilowatt turbine.

The German Electric Light plant supplies electric light to the former German concession. It is managed at present by the "Special Bureau for Administrative Affairs." The current supplied is 440/220 volts, direct. This was originally a German company, and has now been taken over by the Chinese Government.

Small independent plants in Tientsin are:

The plant supplying electric light to the United States Army barracks, located in the former German concession. This supplies 440/220 volts, direct current, by means of a 52-kilowatt engine.

Carlowitz & Co.'s plant, 110 volts, direct current.

Liddell Bros. & Co.'s plant, 220 volts.

The Astor House Hotel's plant, 110 volts.

PEKING.

The Peking Chinese Electric Light & Power Co. (Ltd.) supplies 3,000/220 volts, 3-phase, 50-cycle, alternating current. The plant has two turbines, and is under Chinese management, with a foreign engineer.

The Peking Electric Light Co. supplies 440/220 volts, direct current. The plant is equipped with producer-gas engines, and is under foreign supervision.

In addition, there is a plant at the palace in the Forbidden City, and also one at the Summer Palace, concerning which no detailed information is obtainable.

CHINWANGTAO.

The port of Chinwangtao is supplied by the Kailan Mining Administration's plant. The current is 220 volts, 50-cycle, alternating.

SHANHAIKWAN.

Shanhaikwan is supplied from the workshops of the Peking-Mukden Railway. The current is 220 volts, direct.

TANGSHAN.

Part of Tangshan is lighted from current supplied by the Peking-Mukden Railway shops. The current is 220 volts, direct. Another part of the town is connected with the lines of the Kailan Mining Administration, which has recently erected a new turbine plant at Linsi (near Tangshan) with a transmission line to Tangshan and Chakochwang. The electrical equipment of the Kailan Mining Administration is reported to be one of the best in China.

The plant of the Chee Hsin Cement Co., also at Tangshan, is 3,000/220 volts, 3-phase, 50-cycle, alternating current, with a 1,250-kilowatt engine.

PAOTINGFU.

Paotingfu has at present an old gas-engine plant that was used formerly in the palace at Peking. It is reported that negotiations are now under way for the erection of a new plant.

KALGAN.

At Kalgan a plant is now being installed by the Mitsui Bussan Kaisha.

TAIYUANFU.

At Taiyuanfu a plant has been installed by a Chinese company. The current supplied is 220 volts, direct.

So far as is known, none of the above-mentioned companies is bound by any agreement to obtain its equipment from any one supplier.

The usual charge for electric consumption is about $28 for the first 1,000 units, and then at a decreasing rate.

WATERWORKS.

The waterworks of Tientsin consist of two systems—the Tientsin Waterworks Co. (Ltd.), a British concern, and the Tientsin Native City Waterworks. The first-mentioned does not give entire satisfaction, especially with regard to fire protection, whereas the latter in this respect is more effective. The filter system employed by both concerns renders the water practically free from impurities.

In Peking there is the Peking Waterworks Co. (Ltd.), organized and managed by Chinese but with foreign engineers. It has many stations throughout the city and gives a good service.

The water charges range from $0.70 per 1,000 gallons, Chinese system, to $1 per 1,000 gallons, foreign system.

TREATY PORTS AND FOREIGN CONCESSIONS.

The principal treaty ports of this district are Tientsin and Chinwangtao. The former was opened to foreign residence and trade in May, 1861, under the British treaty of 1860, while the latter was opened in December, 1901, under an imperial decree of 1898. Kalgan, Chihfeng, Chaoyang, and Dolon-nor, in northern Chihli near the Mongolian frontier, were opened in 1916 under a presidential order.

TIENTSIN.

Tientsin, at the junction of the Peiho and the Yuho, about 40 miles from the coast at Taku, is excellently situated both for domestic and foreign trade, and Chinwangtao on the sea, being ice-free, is important as being the sole port of Tientsin and Chihli during the winter months. The Peiho River and Taku bar freeze over early in December and remain closed to navigation until about March 1, except when the bar in mild winters is kept open by means of ice-breakers. The depth of water on the Taku bar ranges from 11 to 14 feet. Vessels bunkering outside the bar are served by lighters from Tangku.

Tientsin is well served with railways and rivers. It has an area of about 24 square miles and a Chinese population of about 1,000,000. The European and American population in Tientsin, while very fluctuating, may be reckoned at about 3,000 persons. The foreigners include a wide range of nationalities—British, Americans, French, Russians, Japanese, and Germans constituting the largest foreign communities. The Americans, excluding the military, number about 300. In Tientsin the winters are cold, clear, and dry, with but little snow. The summer is short, but the months of July and August are generally hot and sultry, rain falling almost daily.

There are at Tientsin eight foreign settlements—those of Great Britain, France, Japan, Russia, Italy, and Belgium, as well as the former German and Austrian concessions. On March 16, 1917, the Chinese authorities took over the German concession in consequence of the Chinese Government's having broken off diplomatic relations with Germany. On August 14, 1917, when China declared war on Germany and Austria-Hungary, the Austrian concession was also taken over. Special bureaus for administrative affairs were appointed, which administer on the same lines the municipal regulations existing previously.

A brief account of the formation of the various concessions in Tientsin may be helpful to an understanding of the present situation. The Chinese superintendent of trade for the northern ports, in 1860, just subsequent to the opening of Tientsin to foreign residence and trade, as provided by the various treaties of that year, laid out in that port three tracts of land along the river as concessions or places of settlement for English, French, and American residents. The land areas measured off for the English and French concessions were purchased by those Governments from the Chinese Government and then sold to persons of any foreign nationality desirous of buying. Similar action, however, was not taken by the United States. The American purchasers, of whom there were several, bought directly from the Chinese Government those plots of ground within the limits of the so-called American concession that they desired to secure. On June 27, 1896, this small tract was unreservedly handed back to the Chinese Government. The Chinese authorities, however, failed to resume jurisdiction, so that the exact status of the area remained undetermined until 1902, when the American Government, with provisions looking toward a resumption of jurisdiction in certain contingencies, handed over the concession to the British Municipal Council, with which municipality it has since become incorporated. The land for the German concession was ceded in 1896. In the same year the Japanese took up a concession in accordance with the terms of the Treaty of Shimonoseki. They filled in land, laid out streets, and built a large number of houses in foreign style. Thus up to 1900 foreigners resided only in three concessions—British, French, and German, which fringed the river below the city and covered an area of less than 500 acres.

During the Boxer disturbances in 1900–1901 various foreign powers appropriated for concessions large tracts of land in Tientsin and its environs. Those powers that previously possessed concessions extended very considerably their respective boundaries, while others, Russia, Belgium, Italy, and Austria-Hungary, secured large areas on the left bank of the Haiho as future settlements. These developments have placed all present and future landing facilities for direct seagoing traffic in foreign hands.

The concessions have excellent and well-lighted roads, with an electric tramway system. They are efficiently policed. The British municipality has an attractive town hall, completed in 1889; adjoining there is a well-kept public garden, opened in 1887 and called Victoria Park. Nearly all the concessions have spacious, beautiful parks. An excellent recreation ground of 10 acres has been developed in the British concession, and 3 miles distant there is a splendid race course. There are two large hotels, two clubs (the Tientsin Club and the French Club), two excellent libraries, and three churches (Roman Catholic, Anglican, and Union). Electric lighting was introduced in June, 1905. In fact, all the features found in modern municipalities exist in the various concessions of Tientsin.

The concessions at Tientsin, while organized by the foreign governments primarily concerned, are maintained by all the foreign residents who are citizens or subjects of treaty powers and at the same time owners or renters of land in these localities. Though China retains sovereignty over these areas, it has relinquished all jurisdiction. The classes of foreign residents above described constitute the ratepayers to whom the right of franchise is generally limited. They elect annually the municipal councils, which are charged with the general administration of public affairs in the various settlements. The municipal councils originate the regulations for the government of the settlements, and, after their approval and promulgation by the proper authorities in China of the country holding the concession, see to their enforcement. The organic regulations enacted for the administration and control of the various concessions have in each instance been submitted by the holding Government to the Governments of the other treaty powers for approval. Once the concession and the regulations are thus recognized (as has been done by the United States in the case of all the Tientsin concessions), the ordinances of the various municipalities are held as applicable to those American citizens who reside in any of these concessions.

ADMINISTRATION OF CONCESSIONS—RIGHTS OF FOREIGNERS.

The consular representative of the country possessing a concession exercises superior authority in its affairs, and in a number of instances serves as ex officio chairman of the municipal council. The councils as a rule are empowered by regulations of their respective governments to control the planning of the streets, the leasing of land and buildings, the guarding and policing of the settlements, and the educational and sanitary measures therein. Each of the settlements has its own police force. The councils impose and collect local taxes to defray maintenance charges. All construction charges and such excess of maintenance charges as can not be met by local taxation are defrayed by the government of the country concerned.

Under the provisions of the treaties with China, citizens and subjects of the treaty powers residing therein are amenable only to their own laws and courts. They are exempt from the enforcement of Chinese laws and the jurisdiction of Chinese courts. This is the system of "extraterritoriality." Thus American citizens in China are not subject to any judicial control except that administered by the American consular authorities and the officers of the United States Court for China. It has been explained how, in addition to American laws, police and other regulations promulgated by the foreign municipalities, and subsequently approved by the consul general and the minister, are enforceable against Americans.

As regards judicial procedure, no American citizen can be arrested or complained against in a civil action, except by and through the action of the proper consular officer of the United States, or the proper officer of the United States Court for China. Whether an American citizen commits a criminal offense or is amenable to a civil process, even though the offense may be merely an infraction of the local municipal ordinances which he himself has a voice in enacting and which the consul and minister of his country must have approved before their applicability to him was determined, there is no officer of China, or of any other nationality in China, who has jurisdiction, except the above-named officers of the country of the accused. The only warrant or summons an American citizen is required to obey must bear the signature of the consular officer of the United States or else of the judge of the United States Court for China.

There are no limitations upon the rights of all friendly aliens to reside and transact business in the concessions. Such foreigners may lease land in any of the concessions, but as a condition precedent thereto are compelled to sign an agreement to abide by the municipal regulations and by-laws. The agreement is witnessed by the consul of the lessees' nationality.

The Chinese Government may not arrest one of its own citizens within the settlements without the authorization of the consul concerned, and while such citizen is tried in a native court, yet a foreign assessor representing the consul may be present—usually by agreement the consul of any citizen who may have an interest in the case. The purely Chinese courts, in which no foreign assessor appears with authority of any considerable degree, are occasionally invoked in aid of foreign plaintiffs at Tientsin. But usually difficulties with Chinese are left to the friendly settlement of the consul of the plaintiff in correspondence or conference with the Chinese officials.

In each of the concessions the holding country has a consular establishment to look after the interests of its nationals. In addition, Brazil, Denmark, the Netherlands, Norway, and Spain have consular representation in Tientsin; the consul for Belgium is also acting consul for the Netherlands and for Spain; the Russian consul general serves as acting consul for Denmark, while the representatives of Norway and of Brazil are local merchants. There are no consulates in Chinwangtao, Kalgan, and the other treaty ports. The American consulate general at Tientsin is at present located in the Rue de Paris, French concession.

CHINWANGTAO.

The harbor at Chinwangtao, though good, is very small. The population of the city is about 50,000. Steamers visiting Chinwangtao are mostly colliers owned or chartered by the Kailan Mining Administration, which has adopted all possible measures for working ships with increased rapidity. Arrangements are made to berth at night and start working without loss of time. The harbor has a depth of 23 feet at its entrance and 26 feet along the breakwater. Chinwangtao now ranks as the premier port east of Suez for the shipment of coal, its export being larger than that of any port in Japan and equal to three times that of Hongay, in Tongking. In Chinwangtao and the adjoining seaboard places of Peitaiho and Shanhaikwan the climate is very healthful, many persons from all over North China going there during the heated period to enjoy the cool breezes and salt-water bathing.

STATUS OF PEKING IN RELATION TO FOREIGNERS.

Peking is not an open port or place of trade, and foreigners other than members of the diplomatic body, those connected with the Chinese Government services, missionaries, and teachers in schools and colleges can not, therefore, base their right to reside outside the Legation Quarter upon any treaty stipulation. However, a number of foreigners other than the classes enumerated above, through sufferance and without any restrictions, reside and carry on trade there. The question of setting apart an area for foreign residence and business was considered by the Chinese Government in 1912. Peking has about twice the area of Tientsin and an estimated population of 600,000. There are 425 Americans residing in Peking, the great majority of whom are missionaries engaged in evangelical, educational, and medical work. Also many Americans there are employed as instructors in native schools and colleges, while others are engaged in hospital work.

FOREIGN POPULATION OF TIENTSIN DISTRICT.

In 1917 the foreign population of the Tientsin district, according to the customs statistics, was 8,951, comprising 4,752 Japanese, 1,371

British, 1,043 Americans, 613 Germans, 202 Belgians, 194 French, 167 Russians, 124 Austrians and Hungarians, 87 Italians, and 398 of other nationalities. Of the 357 foreign firms in 1917, 157 were Japanese, 81 British, 32 German, 28 French, 27 American, 8 Russian, 7 Belgian, 6 Italian, 6 Austro-Hungarian, and 5 of other nationalities. The foreign residents and firms include persons of Chinese origin or descent who are citizens, subjects, or protégés of the nationalities indicated. The German and Austro-Hungarian firms ceased doing business upon China's entrance into the war.

Conditions in the treaty ports of this district are favorable to foreign trade generally, and American trade in the foreign concessions does not suffer as contrasted with that of the holding nation. In each of the concessions there is the "open door," or principle of equality of commercial opportunity.

FINANCE AND BANKING.

The currency question is as complicated in this district as elsewhere in China. Copper cash have made way for the 10 and 20 cash copper coins. Among the natives small business transactions are done in copper cents, the price of the article purchased being payable in dollars or notes, as the case may be. For instance, if cotton be offered for sale, the price will be estimated at so many cents, and payment will be effected in local currency at the rate of exchange of the day. The general Tientsin currency in business with foreigners is "large" silver dollars and bank notes. Among the natives, besides copper cents, there are current, as subsidiary coins, 10 and 20 cent silver pieces, each stamped with a tael value. The Hongkong and Mexican dollar are now seldom seen and are sometimes at a premium and at other times at a discount. Prior to the revolution of 1911-12 the Peiyang dollar was in general use and many are still in circulation. The newly minted Republican dollars, which were put into circulation after the revolution, are current everywhere, as they show no distinctive mark of the mint that issued them. Besides the Republican dollar, which is to be the sole unit of the new monetary system once it is firmly established, there are being issued subsidiary silver coins in denominations of 50 cents, 20 cents, and 10 cents. The value of the Republican dollar in reference to the small coin and the copper cents varies daily, the present value for small coin ranging from 108 to 122 cents and for coppers from 130 to 135 cents. This applies also to the Peiyang dollar. A preference is shown for foreign bank notes, as they can be cashed on presentation at the local bank agencies.

Great quantities of notes for "large" dollars have been issued under Government guaranty. Copper-coin notes are issued by the Ministry of Finance in denominations of 10, 20, 40, and 50 copper cents.

Although the dollar is used in domestic and retail transactions, the tael is the unit of value in large commercial transactions between foreigners and natives. As the tael is not a coin but a weight, it is converted into a dollar value at the current rate.

There are in Tientsin at least three kinds of tael—the hongping, the kungfa, and the Haikwan, or customs, taels—two different kinds of dollars, small coin in silver in every coinage of the Republic, copper coin in notes, copper cents, as well as the notes of eight different foreign banks located in Tientsin and in Peking.

The Bank of China and Bank of Communications are national banks of China, but as their note issues at Peking are without sufficient reserve, they are depreciated and sell at a discount, at present over 40 per cent less than their nominal value; but the notes of the Tientsin branches of these two banks circulate alongside the foreign bank notes on the local market in business transactions.

The foreign banks operating in this district are the following (all having establishments in Peking and Tientsin):

Hongkong & Shanghai Banking Corporation.
Chartered Bank of India, Australia & China.
Banque de l'Indo-Chine.
Banque Industrielle de Chine.
Banque Belge pour L'Étranger.
International Banking Corporation.
Asia Banking Corporation.
Russo-Asiatic Bank.
Yokohama Specie Bank (Ltd.).
Deutsch-Asiatische Bank (closed in consequence of China's declaration of war against Germany).

These banks engage in every kind of banking and exchange business, but a general preference is given to the merchants and traders of the same nationality as that of the banks.

A Sino-Japanese Exchange Bank has been opened lately in Peking to facilitate loan arrangements between China and Japan.

In addition to the two Chinese Government banks there are many private banks, among which are several large and prominent institutions. The opening in Peking of the head office of the Ta-Ching Bank (now the Bank of China) in 1905 was followed by the establishment shortly thereafter of suboffices at Tientsin, Paotingfu, and other centers in the Province. As soon as this bank was known to be a profitable undertaking, other banks sprang up, and there are now in Chihli Province alone many other large Chinese financial concerns, such as the Chihli Provincial Bank, Chih Cheng Bank, Chung Foo Union Bank, etc.

The usual rate of interest on fixed deposits and current accounts in taels given by foreign banks is 5 per cent and 2 per cent per annum, respectively; the rate of interest charged on overdrafts is 8 per cent. With the larger Chinese banks conducted along foreign lines the rate of interest on fixed deposits is 10 per cent and on current accounts 4 per cent a year, while the interest on short-term loans against real-estate security and crops security is at the rate of 12 to 15 per cent a year according to arrangement. Thus it is seen that Chinese dealers can obtain banking facilities from the larger Chinese banks at rates not much higher than those charged by foreign banks.

Loans made with ordinary private banks are limited to a period of one year. Interest on loans under $1,000 is charged by these banks at a rate of 2 per cent a month; above $1,000 and within $3,000, at the rate of 1½ per cent a month; above $3,000 and within $5,000, at the rate of 1 per cent a month; above $5,000, four-fifths of 1 per cent a month. The average rate of interest charged on large loans varies from $0.90 to $1.20 a month per $100. The interest charged on loans by individual merchants to each other is $2.50 to $3 a month on every $100. The Chinese banks in local exchange business seldom have a capital exceeding $100,000 Tientsin currency.

So far as assistance in developing Chinese trade is concerned, the larger native banks are gradually coming to play a more important rôle, but the ordinary private banks in respect to trade extension are practically useless. The business of the latter appears to be restricted to advances on real estate and other approved securities at high rates of interest and to dealing in exchange values, in which the numerous currencies and notes of North China afford an extensive business.

MANUFACTURING AND OTHER INDUSTRIES.

Agricultural pursuits form the principal occupation of the Chinese in this district. Next in order of importance come the numerous small industries, some of which are of the household type. All these industries, though extensively developed, have made little progress, as the methods are antiquated and the tools crude and primitive. However, in the larger cities, such as Peking, Tientsin, Paotingfu, etc., manufacturing and other industries are conducted on a much larger scale and according to more modern methods than in the country districts. The principal native industries in order of importance are: Cotton growing and manufacture, raw cotton being produced in large quantities in Chihli and northern Honan; sheep raising and woolen manufacture, carried on chiefly in the northern towns, Kalgan, Kweihuacheng, etc., which are centers in the region devoted to sheep, goat, and cattle raising; the production of goatskins, which enters so largely into the export trade; and coal mining, which is a leading industry, this mineral being found in many places throughout the district. Coal has come extensively into Chinese household use, and the fact that it can be readily obtained at reasonable prices has stimulated all the various industries of the district. The manufacture of coarse unrefined salt by the evaporation of sea water is also carried on near Taku. Wool cleaning and braid and bristle sorting are the chief industries conducted by the foreign firms except those of the Russians, who are principally engaged in the transit of tea.

The chief native manufactures are cotton yarn, cotton belts, sheetings, articles of clothing, carpets, shoes, bean cake, bean oil, chinaware, matches, glass, mats, straw braid, metal manufactures, leather, and the curing and piecing together of skins. Distilling is also a large local industry. The product is derived from kaoliang or millet and is exported to the southern ports of China. Peking is well known for its cloisonné or enameled ware, which is manufactured in large quantities. The fine arts are unknown to the natives of Tientsin except for cleverly made mud figures; these are attractively painted but are difficult to transport, being very brittle.

In Tientsin there are numerous factories under Chinese control and management, namely, 20 weaving factories, and an equal number of soap and candle factories, 20 factories producing cigarettes, glassware, and matches, and 2 tanneries. There are also small factories making tooth powder, perfumes, shirts, socks, canned goods, condensed milk, and leather goods. Throughout the Province, under government auspices, are about 80 industrial institutions, weaving factories, technical schools, and practical training factories, apart from a large number of private institutions of like nature. These native industries, though now too limited in output to have much, if any, effect on the market, are worthy of note as indicating that in time North China will become an industrial center of considerable importance.

The introduction of technical industry in the Province originated in the establishment in 1903 of the Practical Training Factory, into which the poorer classes were admitted to be trained in industrial arts. There are 14 different sections, with the fixed number of 500 students, and up to date about 1,600 students have graduated from the factory. They are employed as instructors by official as well as private factories throughout the Province. Many of the graduates have been engaged as tutors in the government factories in Manchuria, Shansi, Shantung, Honan, and Shensi, and about 100 of them are working as experts in the Pachi Factory and the industrial institutions in Peking. The articles manufactured at the factory are sold at the general industrial salesroom.

The Higher Technical School, which has the full number of 120 students, is divided into the sections of chemistry, mechanics, and drawing and painting. The graduates of this school are engaged in business. As preparatory schools there are attached to this the Middle Technical School and the Primary Technical School. The High Industrial School in Hopei, Tientsin, is an institution similar to the Higher Technical School.

The Industrial Exhibition Room has on display various articles of industrial arts for public inspection; a competitive exhibition is held once a year, when prizes are given. As a means of encouraging industrial arts, lectures are given by experts on subjects touching upon the principles of trade and industry. These experts are also despatched by turns to all parts of the Province to investigate and report upon the condition of various industries. The General Investigation Society of Trade and Industry was organized to discuss matters relating to the manufacture and improvement of various objects of industrial arts. In the Educational Factory various articles for educational purposes are made. Already 400 different kinds have been produced and have obtained the sanction of the board of education. These are displayed in the exhibition room, and demands for them are coming in continually from schools in other Provinces.

Besides the Practical Training Factory, there are the Industrial Ironworks and the Kwang Jen Tang Women's Workshops, both of which are producing good results. But by far the most important and largest enterprise is that of the Chee Hsin Cement Co., whose factory is at Tangshan and whose head office is in Tientsin. This concern produces large quantities of cement, brick, tiles, etc., for local consumption as well as for export.

The following are the leading Chinese factories of the district conducted according to western methods:

Changtefu:
- Kwang Yü Spinning Mill.

Tientsin:
- **Chee Hsin Cement Co. (Ltd.)** (factory at Tangshan).
- **Government Woolen Cloth Factory.**
- **Hua Chang Match Co.**
- **Hua Hsin Cotton Spinning Mill**; 25,000 spindles of American make, producing yarns 10s to 20s; was expected to commence operation in the autumn of 1918.
- **Heng Yuan Cotton Mill**; 10,000 spindles and 200 looms of American make, to make heavy sheetings, drills, and canvas; was expected to commence operation in the autumn of 1918.
- **Mu Fan Cotton Mill**; 5,000 spindles of English make, making only yarns of 16s and 32s.
- **Peiyang Match Co.**

Tientsin—Continued.
- Peiyang Tannery.
- Peiyang Tobacco Co.
- Tientsin Leather Factory.
- Tientsin Wool Spinning Factory.
- Tung Sheng Soap and Candle Factory.
- Wahsing Cotton Spinning Mill; 25,000 spindles.
- Yu Yuan Cotton Mill; 25,000 spindles of American make, producing yarns same as Hua Hsin Mill; work commenced March 1, 1918; $845,000 extension, for 21,000 spindles, is in course of erection.

There are also the workshops connected with the Peking-Mukden (Tangshan) and the Peking-Hankow (Changsintien) railways, as well as the Government Mint at Tientsin and the arsenals at Techow and Taiyuanfu. All these establishments, both private and government-owned, have extended in size and capacity year by year, and the output of the private mills and factories is gradually reaching even foreign markets. Recently the national Government, realizing that the development of China's great natural resources is necessary for the progress of the country, has adopted a policy of encouraging the promotion of industrial and manufacturing enterprises with either foreign or Chinese capital.

The leading foreign industries in this district are as follows:

Peking:
- Imprimerie de Pekin

Shanhaikwan:
- Crystal (Ltd.); aerated-water factory.

Taku:
- Taku Tug & Lighter Co.; docks and machine shops.

Tangku:
- Asiatic Petroleum Co.'s oil tanks.
- Etablissements de Tongku; shipbuilding, machine shops.

Tangshan:
- Kailan Brick and Tile Factory; clay, fire bricks, cement.
- Kailan Mining Administration; coal.

Tientsin:
- Belgian Brick Factory; bricks, tiles.
- Brossard, Mopin et Cie; shipbuilders, founders.
- Bulgheroni, A. C.; manufacturer, marble, cement works.
- Chung Tung Litho Works; printers.
- Collins Wool Cleaning Works.
- Commercial Press (Ltd.); printers.
- E. Tai; printers.
- Eastern Engineering Works; machine shops, foundry.
- Forbes Wool Cleaning and Pressing Works.
- Fuji Paper Mill Co.
- International Bicycle Co.; manufacturing jinrikishas.
- Karatzas Bros. & Co.; tobacco factory.
- Liddell Bros. Wool Cleaning Works.
- Mackenzie & Co.'s Wool Cleaning and Pressing Works; hydraulic press.
- Manufacture Céramique de Tientsin; bricks, tiles.
- Marzoli, E.; sandstone, cement works.
- Menga, C.; preparing hair and manufacturing hair nets.
- North China Printing and Publishing Co.
- Protopapas & Co.; tobacco factory.
- Salutaris Co.; aerated-water factory; Mackie & Co., agents.
- Show Hsing Flour Mill.
- Standard Oil Co.'s oil tanks and tin shops.
- Syndicat Industriel et Commercial; foundry, machine shops.
- Takeuchi's General Factory.
- Tannerie Franco-Chinoise.
- Tientsin Asbestos Co.
- Tientsin International Mineral Water Co.
- Tientsin Press (Ltd.); printers.
- Tientsin Tobacco Co.; manufacturers of cigars and cigarettes.
- Wilson & Co.'s Wool Cleaning Works.

The supplies of raw materials for these factories come from the interior, and the output is disposed of locally or abroad.

On January 1, 1919, an American flour milling company began operating its newly erected mill in the Russian concession, Tientsin. The company, incorporated in the United States, is capitalized at $100,000, with American and Chinese shareholders, Americans supplying the greater part of the capital. The output is 25 barrels or 100 sacks per day. The flour thus far finds its market in Tientsin, and sells at $2.30 to $3 local currency per 50 pounds. At present Honan wheat alone is used. The milling machinery is American, a kerosene engine furnishing the power. The Tientsin mill is the first in operation of a comprehensive system of mills to be erected by the company at various centers in North China, according to a scheme corresponding to the community mill project in the United States. The company plans later to engage in the pressing of bean oil and the making of macaroni.

An American concern has begun work on a new cold storage, meat packing, and egg albumen plant. The company will conduct as an adjunct thereto a modern slaughterhouse with stockyards. The site contains six acres and is located in the Russian concession, Tientsin. The plant is situated conveniently to both the railway and the water front. The total investment will be about $500,000. To begin with, the business will be chiefly cold storage and albumen and ice manufacture, but later it is expected to include the packing and canning of meats and poultry.

In the early part of 1919 a Japanese cigarette factory was in process of erection in Tientsin, and a Japanese company was building a plant for the extraction of oil from oil-bearing seeds.

It is anticipated that factories in many of the lines above indicated will be extended along the Peking-Hankow and the Peking-Suiyuan Railways, where they will be nearer the sources of supply of raw materials, such as iron, coal, wool, cotton, etc.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Tientsin during the years 1904, 1913, and 1918:

Imports and exports.	1901	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$10,729,390	$37,488,637	$70,852,813
From Chinese ports	13,585,347	14,795,744	19,876,306
Total foreign imports	24,314,737	52,284,381	90,702,119
Reexports of foreign goods:			
To foreign countries and Hongkong	39,963	34,665	....
To Chinese ports	397,281	492,447	....
Total foreign reexports	437,244	527,112	2,648,065
Net total foreign imports	23,877,493	51,757,269	88,054,054
Imports of Chinese products	13,256,786	18,663,893	31,384,171

Imports and exports.	1904	1913	1918
Reexports of Chinese products:			
To foreign countries and Hongkong	$1,445,317	$380,405	....
To Chinese ports	9,814	231,111	....
Total Chinese reexports	1,455,131	611,516	$801,629
Net total Chinese imports	11,801,655	18,052,377	33,582,542
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	1,365,779	5,562,488	31,545,127
To Chinese ports	8,465,171	22,052,407	29,512,769
Total exports of local origin	9,830,950	27,614,895	61,057,896
Gross value of the trade of the port	47,402,473	98,563,169	186,144,186
Net value of the trade of the port	45,510,098	97,424,541	182,694,492

EXPORT TRADE.

The increase in the volume of exports from the Tientsin consular district during the past 15 or 20 years has been phenomenal in trade annals in China. The export trade has increased pari passu with the development of the native industries, and is largely due to foreign initiative. In the decade preceding the war there was a constantly growing demand abroad for the native products of this region, but the war has given the greatest impetus to the export trade. There has been a constant and increasing demand from Japan, Europe, and America for all the principal products, because of the enormous consumption of raw material required for the clothing and equipment of newly raised troops. The leading articles in demand have been wool, cotton, hides, and skins, used for clothing and footwear. Articles of local origin exported to America in large quantities are, in addition to those just named, bristles, straw braid, peanuts, walnuts, vegetable oils, etc. There was an increase of more than $10,000,000 in the value of exports to the United States during 1917, as compared with the preceding year, the total value of declared exports from Tientsin to this country having been $33,374,858 in 1917 against $22,752,013 in 1916. Exports to the United States in 1918 were valued at $29,890,600. The exports from Tientsin to the United States amounted in 1903 to only $3,700,000, and this sum represented an increase of over $1,500,000 above the previous year. The figures given do not represent the total value of exports from Tientsin to the United States, as many cargoes of products from this district are made up and shipped from Shanghai and Kobe.

Tientsin now ranks next to Shanghai in size and in the importance of its trade. It is virtually the great distributing point in North China for foreign goods and the depot for the collection of native produce destined for shipment abroad. Work is proceeding on land and water to extend its facilities as a commercial port. With the improvements to the Haiho and the Taku Bar, including the demonstrated possibility of keeping the river open in winter as far as Tangku by means of ice breakers, the accessibility of the port has been greatly enhanced for large and deeper-draft vessels. The extension of the railways has opened up new markets, tapping vast areas of production and consumption, whose nearest port is Tientsin; but in spite of the importance of the trade in foreign goods, the export business of Tientsin is distinctly the most significant and characteristic feature of the place and is commanding constantly growing attention from the local business houses.

The total values of the export trade for the years 1904, 1913, and 1918 show that it has increased more than fivefold, the figures for these years standing as follows: 1904, $11,286,081; 1913, $28,226,411; and 1918, $61,859,525. Improved means of communication, especially increased facilities for railway transport, have greatly contributed to this advance in trade.

Notwithstanding these increases, the export trade of this district since the outbreak of war has been hampered by the high exchange, as well as excessive freight rates, scarcity of tonnage, and the prohibition or restrictive regulation of imports by belligerent countries. Another factor operating against exports was the difficulty in bringing stocks from the interior because of internal disorders and floods. The unfavorable conditions for the exportation of local products have been, however, more than counterbalanced by an increased demand from abroad and a willingness to pay almost any price to obtain goods.

A noteworthy development of direct trade with foreign countries has taken place during the past decade. In earlier years the Tientsin market shipped the bulk of its exports to foreign countries through Shanghai agencies, and drew its supply of foreign goods mostly from Shanghai. But an ever-increasing number of ocean-going steamers have come to Tientsin, bringing and taking direct cargoes from and to America, Europe, and Japan.

As to methods of financing the export trade, the usual procedure is to purchase in the open market and to make payment as soon as shipping documents are obtained. The long interval between purchase and shipment, due to the distance of the interior points from the shipping ports (in some instances wool travels overland 50 days before reaching Tientsin), is financed by the comprador; but when the shipping documents and consular invoice are obtained, the shipper may secure advances upon the cargo from one of the foreign banks. The foreign firms make their purchases through the comprador, who employs experienced native agents in the various producing centers and through them makes judicious advances to the producers, thus securing contracts for forward delivery at prices appreciably below average market rates. The large Japanese firms have adopted the same system, except that the services of the comprador are dispensed with. This system is favored by many producers, as it insures a firm and reasonable price for their goods instead of prices arbitrarily fixed by the local chambers of commerce and the various trading guilds. Cash buying is of value not only for the immediate benefits derived from purchase, but for the impression it makes upon the natives, who are likely to sell more cheaply for cash to the foreigner, with his supposed abundant capital, rather than to accept the risks of even better terms from native dealers. If the foreigner has to ask for terms, both the moral effect and the advantage are lost.

STATISTICS OF PRINCIPAL ARTICLES EXPORTED.

The quantity and value of the principal articles exported (including reexports) from Tientsin to foreign countries and Chinese ports through the Maritime Customs during 1904, 1913, and 1918 are shown in the following table:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metals:						
Brass, old .... pounds..	(a)	(a)	123,333	$4,772	3,088,267	$490,132
Copper, old .... do....					197,200	33,356
Iron—						
Old .... do....					98,416,983	2,013,413
Pig .... do....					37,178,267	2,328,568
Beans, green .... do....	17,788,267	$186,364	17,055,333	224,308	15,264,400	382,099
Bones, refuse .... do....	10,931,064	32,601	42,626,400	236,881	35,404,667	433,595
Bristles .... do....	1,993,864	705,568	2,434,000	1,410,405	2,702,000	2,595,339
Carpets .... pieces......	1,483	4,051	4,252	54,015	10,042	416,531
Carpets .... square feet..			21,589	6,336	9,965	7,743
Cement .... pounds..			7,217,200	33,352		568,066
Chestnuts .... do....	846,132	10,782	3,620,933	99,739	3,482,267	140,209
Cotton, raw .... do....	1,412,932	117,170	44,851,200	5,915,548	43,650,880	12,702,217
Egg albumen and yolk, preserved, moist .... pounds..			b 105,733	b 4,839	12,533	3,762
Egg yolk:						
Preserved, dried ..... do....			c 596,533	c 29,002	1,176,000	356,074
Preserved, moist ..... do....					172,533	23,463
Eggs, fresh .... number..	1,517,500	4,006	74,645,270	409,772	64,123,044	478,117
Feathers, duck, fowl, etc., pounds	91,464	4,255	204,686	58,274	82,800	17,853
Fibers:						
Hemp .... pounds..	86,532	5,140	577,600	40,686	5,301,867	652,279
Jute .... do....	4,624,932	94,170	10,590,933	433,325	5,841,600	295,313
Groundnut pulp .... do....			1,669,600	51,719	4,321,600	219,182
Groundnuts .... do....	33,066,800	448,621	3,043,867	72,185	1,592,000	47,607
Hair:						
Goats' .... do....	94,132	2,662	163,867	15,172	187,067	37,063
Goats', refuse .... do....			128,800	5,527	136,400	12,983
Horse mane .... do....	796,264	136,113	952,800	116,585	574,133	127,008
Horse tails .... do....			540,133	160,339	425,200	210,457
Human .... do....	30,932	5,354	567,733	54,127	676,933	83,511
Hides:						
Cow and buffalo ...... do....	1,369,332	148,781	3,591,200	679,135	1,809,200	679,888
Horse and ass .... do....	88,664	9,793	1,074,533	136,141	2,305,200	506,802
Intestines:						
Pig .... do....			1,633,923	93,802	422,533	128,547
Sheep .... do....	194,606	5,807	96,671	5,583	84,000	25,568
Licorice root .... do....					6,068,733	685,244
Medicines .... do....	8,137,864	379,407	7,985,867	498,074	6,387,867	696,379
Oil:						
Castor .... do....			3,733	204	4,548,800	437,529
Groundnut .... do....	359,464	10,231	375,467	16,023	2,203,067	221,760
Samshu .... do....	4,325,464	141,698	14,426,667	523,677	5,139,200	298,889
Samshu, medicated ...... do....	3,801,064	150,505	7,264,533	363,571	3,665,067	299,753
Seed:						
Cotton .... do....			18,191,333	127,290	7,321,467	97,276
Linseed .... do....			27,265,200	436,258	12,581,467	393,178
Rape .... do....			30,877,867	469,621	14,044,533	443,594
Skin (fur) clothing:						
Kid crosses—						
Black .... pieces..			53,097	65,799	66,391	107,426
Colored .... do....			17,491	13,388	78,573	95,385
Lamb—						
Coats, Tibet ..... do....			7,827	65,996	17,839	290,286
Crosses—						
Mongolian ... do....			29,073	59,570	5,077	24,663
Slink .... do....			46,705	54,829	63,527	171,280
Tibet .... do....			2,824	20,966		
Skin (fur) mats, dog ...... do....	88,145	17,608	511,801	266,383	544,429	587,641
Skin (fur) rugs:						
Goat—						
Black, gray, and white, pieces	902,549	548,461				
Black .... pieces..			32,938	23,753	154	208
Gray .... do....			154,301	135,698	38,460	56,331
White .... do....			73,401	63,559	25,452	37,742
Sheep .... do....	557,222	88,096	43,331	34,007	14,359	21,293

a Unenumerated. b Albumen, dried. c Yolk, dried.

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Skins (furs):						
Fox—						
Large..........pieces..	22,412	$54,442	92,939	$339,873	18,903	$126,286
Tails.............do....	60,572	6,009	26,512	2,581	38,763	10,894
Goat—						
Tanned—						
Black, gray, and white....pieces..	344,650	132,098	...	...	814,906	987,477
Black........do....	...	...	158,678	77,061	64,436	78,178
Gray........do....	...	...	496,487	246,524	622,755	755,577
White........do....	...	...	95,766	47,590	127,715	153,723
Untanned........do....	1,841,137	532,662	2,622,286	826,477	2,481,876	1,526,018
Lamb, Tibet......do....	...	...	301,424	259,616	89,296	120,378
Marmot..............do....	217,575	18,139	207,784	34,282	406,750	109,667
Sheep, untanned...do....	267,193	95,623	371,978	67,195	655,900	482,608
Straw braid:						
Mottled...........pounds..	2,084,800	335,394	355,200	72,282	3,709,067	1,572,128
White...............do....	1,319,332	277,555	661,333	266,671	1,757,467	1,199,025
Tallow, animal...........do....	...	...	2,447,600	147,407	3,330,533	424,650
Tea.......................do....	3,222,533	509,259	1,308,600	215,915	403,200	116,387
Tea bricks...............do....	31,546,532	851,716	3,338,000	137,615	624,800	69,153
Tea, coarse..............do....	1,080,400	106,960	688,267	35,120	...	...
Walnut kernels...........do....	471,332	23,341	1,180,000	55,515	2,475,867	263,437
Walnuts in shell.........do....	1,025,064	25,436	6,341,333	142,052	3,178,933	160,377
Wool:						
Camels'..............do....	2,748,000	239,415	3,723,867	547,948	5,929,467	2,179,623
Goats'...............do....	466,400	59,620	1,421,067	260,397	1,552,400	504,062
Sheep's..............do....	23,672,800	2,005,565	29,558,400	4,397,930	37,927,333	4,416,960
All other articles..........	...	2,755,608	...	6,456,025	...	8,620,409
Total net value..........	...	11,286,081	...	28,226,411	...	61,859,525

GREAT ADVANCE IN SHIPMENTS OF RAW COTTON.

The outstanding feature of the export trade is the great advance made in the shipments of raw cotton. Prior to 1909 the amount of cotton exported from Chihli and a part of Shantung, Honan, and Shansi did not exceed 530,000 pounds. In the year mentioned it increased 3,300,000 pounds, and since then has been increasing until in 1918 it reached 43,650,880 pounds. This is attributed to the high price of American cotton and to the strong demand in Japan; but the increased production is mainly due to the substitution of cotton for poppy cultivation. Generally speaking, cotton produced in North China is short in fiber and stiff. Shipments are made chiefly to Japan, Shanghai (for transshipment abroad), America, and Hongkong.

The following are the principal places that supply Tientsin with cotton: Shantung Province—Lintsingchow, Techow. Honan Province—Wuanhsien, Changtehfu. Chihli Province—Chengtingfu, Chaochow, Shuluhsien, Paotingfu, Kwangpingfu, Kichow, and Yungpingfu.

MISCELLANEOUS EXPORTS OF IMPORTANCE.

Sheep's wool is one of the most important exports, and the business therein is constantly increasing. This product is now not only used for coarser manufactures, such as carpets, but the finer grades are being employed in the manufacture of clothing. There is also a large demand abroad for camels' wool. Tibet lambskin crosses have been for many years one of the largest articles of export from this port. The world's demand for lubricants is seen in the largely increased export of oils and of oil-bearing products, such as beans (including the castor bean), peanuts, sesame seed, apricot kernels, and walnuts. There are also shipped yearly large quantities of cotton seed, linseed, rapeseed, and lard, and there is every prospect of continued increase in these lines. Other leading items of export are carpets and rugs, and pig's intestines. The principal buyers of seeds are the Japanese. Since the war there has been a constantly increasing export of peanut oil to the United States, and walnut oil and castor-bean oil were first exported thence in 1917. Walnut oil is chiefly exported to France, where it is used as a substitute for olive oil. There is a good demand abroad for Tientsin carpets and rugs, but after an exceptionally successful year in 1916 the weavers and dealers attempted to substitute an inferior article for the one stipulated for. This was soon detected by the foreign buyers, with the result that large quantities of the inferior articles were thrown back upon the owners' hands, resulting in the closing down of many of the Chinese carpet dealing and weaving firms. Shelled peanuts have a large market abroad, but the unshelled variety can not be handled with profit owing to high freight rates. Shipments abroad of hemp and jute fibers, as well as of horsehair, have decreased in recent years, mainly because of the high freights. For several years there has been a demand in Japan for old brass and copper, as well as old iron in any form; this district is being systematically searched and every article of the kind procurable is being shipped to Japan.

Of the newer commodities on the export list two that give hope of future increase are licorice and asbestos. The trade in the former has been steadily growing since its introduction a few years ago, and judging by the capital now invested in this business, licorice is likely to become a permanent export. Asbestos from abroad being forthcoming in only limited quantities, a demand for the native article arose. Large quantities were shipped to other ports of China and exported abroad, and there is every likelihood that the exportation of this article will increase. It is chiefly manufactured by the Tientsin Asbestos Co., which makes it by foreign process.

FURS AND SKINS.

Among the leading articles of export from this district are furs and fur skins. Large quantities of goatskins and sheepskins are exported annually to the United States. Previous to the war London was the chief skin and fur market of the world, but since the outbreak of hostilities the principal market has been the United States. The origin of these commodities is difficult to state, but Kalgan is a very large accumulating depot for furs and skins. not only from Mongolia but also from other parts of North China, that eventually find an outlet at Tientsin. An approximate statement as to the percentage originating in the various sections of the district follows:

Kid-skin crosses.—75 per cent from Chihli and Honan, 25 per cent from Kalgan, the Kalgan cargo being of Mongolian origin so far as the skins are concerned, but dressed in Kalgan.

Lambskin crosses.—50 per cent from Chihli, Honan, and Shansi, and 50 per cent from Mongolia.

Lambskin crosses, slink.—All from Chihli, Honan, and Shantung.

Lambskin crosses, Tibet.—The skins from which the crosses are made originate in Kansu, but the goods are dressed and made into crosses chiefly in Shansi, though a few are made in Chihli and Honan.

Sheepskin crosses and coats.—Of Mongolian origin.

Lambskin coats.—50 per cent from Mongolia, the remainder from Chihli, Honan, etc.

Dogskin mats.—85 per cent from Chihli and 15 per cent from Manchuria; fully half of the skins from which the mats are made are Manchurian.

Goatskin rugs.—90 per cent from Mongolia and 10 per cent from Chihli.

Sheepskin rugs.—Of Mongolian origin.

Fox skins and foxtails.—Approximately 25 per cent from Mongolia, 50 per cent from Chihli, Kansu, Shansi, etc., and 25 per cent from Manchuria.

Goatskins, tanned.—95 per cent from Mongolia and 5 per cent from Chihli.

Lambskins (Shuntehfu, Kalgan, and Mongolia).—50 per cent from Mongolia and 50 per cent from Chihli, Honan, Shansi, etc.

Lambskins, slink.—From Chihli, Honan, and Shantung.

Lambskins, Tibet.—These skins originate in Kansu, but are dressed chiefly in Shansi, a few being dressed in Chihli.

Marmot skins.—All from Mongolia.

Sheepskins, tanned.—All from Chihli.

Weasel skins.—75 per cent from Chihli and Shantung and 25 per cent from Manchuria.

PREPARATION OF SKINS—CLEANING AND PACKING OF WOOL AND BRISTLES.

The skins, wool, and bristles shipped from Tientsin do not arrive there in their original condition but have undergone a greater or less degree of tanning and cleaning. The hard water at Tientsin gives very unsatisfactory results, especially in the case of the more delicate skins. Therefore skins in their crude condition and covered by an outward transit pass are carried to the two great tanning centers—Kalgan for goatskins and Kiaochenghsien, near Taiyuanfu, for lambskins. Goatskins, after being sorted, are sewed together into rugs, and then brought down to Tientsin. The sewing up of skins and furs into robes and crosses is effected in the interior and forms an industry amounting to about $3,000,000 a year. Wool is brought down, roughly packed, to Paotowchen, Kalgan, and other packing centers, where it is sorted, cleaned, and properly packed before proceeding to Tientsin. The same happens in the case of bristles, which are brought down—principally from Manchuria—in their crude state to Fengjunhsien, near Tangshan, to be cleaned, sorted, repacked, and sent to Tientsin. Upon arrival there these products, as a rule, undergo still further treatment preparatory to shipment abroad. The wool and cotton are again cleaned and the skins, hides, and bristles again sorted, after which all are repressed and repacked in the hydraulic-press packing factories maintained by many of the larger exporting firms of Tientsin.

PRODUCING CENTERS OF PRINCIPAL EXPORTS.

The producing centers of the main articles of export are substantially the following: Wool, furs and skins, and horse and goat hair come from the northwestern part of the district, Kweihwacheng, Paotowchen, and Kalgan; hides, cotton, and seeds from the southern part, Shuntehfu, Shihchiachwang, Changtehfu, etc.; and walnuts, peanuts, etc., from the eastern part, Tsunhwachow and Lanchow. As all these places are located either on a railway or a waterway, it is easy to transport the goods collected to Tientsin.

DECLARED EXPORTS TO UNITED STATES.

The table following shows the quantity and value of the articles declared at the Tientsin consulate general for exportation to the United States and its possessions during the years 1917 and 1918.

Articles.		1917		1918	
		Quantity.	Value.	Quantity.	Value.
TO UNITED STATES.					
Apricot kernels	pounds	221,440	$10,933		
Beans	do	416,898	26,172	25,082	$2,217
Bristles	do	1,629,707	1,588,064	1,801,772	2,365,633
Carpets:					
New	square feet	714,312	762,012	325,930	333,117
Old			3,543		2,062
Cotton	pounds	14,484,695	2,871,711	4,160,276	1,359,642
Curios			218,806		34,528
Egg albumen	pounds	306,518	258,872	99,396	82,704
Eggs:					
Dried whole	do	500	356		
Fresh	number			36,000	1,147
Egg yolk	pounds	411,488	123,473	2,995	1,943
Feathers and down	do	119,994	28,464	59,304	11,819
Fiber, vegetable	do	91,262	13,924		
Glassware					865
Hair:					
Goat	pounds	195,507	48,747	36,173	37,629
Goat beards	do	14,813	4,003	1,120	789
Cattle	do	347	2,647		
Horse	do	403,777	274,186	420,091	253,988
Human	do	206,225	81,079	423,412	162,762
Nets			21,986		25,498
Hemp	pounds	470,220	88,592	289,301	61,556
Hides:					
Ox and cow	do	1,320,732	499,537	93,388	37,674
Horse and pony	do	436,421	152,057	2,451	10,639
Household goods and personal effects			5,949		6,233
Intestines:					
Pig			139,640		98,987
Sheep			197,902		81,277
Jute	pounds	1,284,418	91,800	304,857	30,105
Lace					177
Lanterns, Chinese			145		47
Lard	pounds	22,800	3,933	45,600	9,772
Licorice root	do	5,020,121	443,478	3,755,843	410,010
Nuts:					
Peanuts	do	4,603,845	324,778	143,000	21,094
Walnuts	do	2,830,646	493,239	1,183,640	389,718
Oil:					
Castor	do	95,274	15,928	267,352	64,084
Linseed	do			4,522	1,028
Peanut	do	111,888	14,067	141,859	24,116
Walnut	do	3,079	1,257		
Peas	do	84,000	5,674		
Platinum dust	ounces			210	24,297
Seeds:					
Flax	pounds	9,600,000	415,380		
Linseed	do	400,000	15,678		
Mustard	do	200,000	9,226	129,200	10,359
Rape	do	424,800	20,115	107,440	7,426
Silk					19,891
Silk clothing and embroideries			25,397		
Skins, furs, mats, and robes:					
Antelope	pieces	23,033	12,409	3,113	1,733
Calf	do	22,185	12,291		
Cat	do			200	412
Deer	do	247	286	10	7
Dog	do	232,775	207,111	450,468	578,965
Ermine	do			230	1,925
Fox	do	10,969	49,607	31,860	110,800
Goat	do	4,765,290	5,563,201	2,040,546	2,268,324
Kolinskies	do	32,303	26,764	18,478	29,861
Lamb	do	5,605	93,862		
Marmot	do	22,540	8,439	209,318	111,359
Rabbit	do	199	73	6,000	1,638
Raccoon	do	3,498	13,117	15,335	57,358
Sable	do			151	9,488
Squirrel	do			129,467	58,329
Sheep	do	1,935,702	2,276,654	510,823	639,963
Slink	do	79	468		
Stone marten	do			85	1,138
Wolf	do	388	2,013	1,000	8,068
Other, unclassed			5,575		
Specimens, natural-history			10,189		1,080
Straw braid			3,149,088		4,606,941

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO UNITED STATES—continued.				
Tails:				
Fox . . . pieces	2,940	$1,564	12,073	$10,703
Horse . . . pounds	40,640	9,802	52,200	36,525
Squirrel		3,450		852
Yak . . . pounds	2,739	3,784	39,411	22,780
Tallow, animal . . . do			52,369	11,537
Tungsten . . . do			1,833	911
Wool:				
Camel . . . do	2,059,135	1,021,208	1,363,282	897,879
Goat . . . do			256,647	147,254
Sheep . . . do	24,700,186	11,580,882	35,049,272	14,341,073
All other articles		20,277		3,364
Total		33,374,858		29,890,600
TO PHILIPPINE ISLANDS.				
Carpets . . . square feet			356	315
Cement . . . barrels	112,227	262,578	21,170	108,622
Coal and coke . . . tons	64,578	235,005	94,480	446,008
Fire bricks . . . do	3,069	5,963	11	171
Fire clay . . . do	107	1,096	1	12
Paper		400		
Glazed tiles . . . square yards	72	243		
Total		505,285		555,123
TO HAWAIIAN ISLANDS.				
Carpets and curios		2,774		1,013
Silk		663		
Total		3,437		1,013

For purposes of comparison the following table is given, showing the value of the declared exports from Tientsin to the United States during the year 1913, the last normal year before the beginning of the war:

Articles.	Value 1913.	Articles.	Value, 1913.	Articles.	Value, 1913.
TO UNITED STATES.		TO UNITED STATES—continued.		TO UNITED STATES—continued.	
Beeswax	$1,085	Nuts:			
Bristles	745,663	Peanuts	$24,102	Silk clothing and embroideries	$1,304
Carpets and rugs	68,314	Walnuts	141,133	Spirits, Chinese	886
Cotton	973,753	Porcelain	12,696	Straw braid	45,203
Curios	63,386	Skins, furs, mats, robes, etc.:		Wool, sheep	3,896,031
Hair:		Calf	1,560	Yak tails	801
Horse	102,118	Dog	332,377	All other articles	6,262
Human	25,973	Fox	22,648	Total to United States	8,343,167
Hides:		Goat	1,351,134	Exports to Philippine Islands	207,099
Cow	104,478	Kolinskies	2,488	Exports to Hawaii	20,035
Horse	17,480	Lamb	65,066		
Household goods and personal effects	20,349	Marmot	12,215		
Intestines, sheep	38,600	Rabbit	5,054		
Jute	87,404	Sheep	170,145		
		Other	3,860		

IMPORT TRADE.

The import trade of Tientsin showed a remarkable growth in the first years after the Boxer troubles of 1900, and this favorable condition has been well maintained in spite of numerous difficulties. The import trade received a severe setback in 1907 as a result of overtrading. In that year the price of silver suddenly dropped, while that of commodities went up, the general purchasing power thereby being greatly reduced. A great blow was thus given to imports as well as to exports. Moreover, Chinese merchants were compelled to suspend payments to foreign firms, the amount involved being 14,000,000 taels for goods they had purchased on credit when the market was booming. The following year, 1908, witnessed another setback, due to political unrest caused by the death of the Emperor and Empress Dowager. The local authorities and the banking circles took steps for relieving the stringency of the money market, and it was decided that various prominent native banks with Government support should loan amounts needed to pay the obligations to foreign merchants. These remedial measures were effected in 1910. Another vexatious question was that of deteriorated "hua-pao" silver, which for several years had caused great inconvenience in commercial transactions. In 1910 the local authorities agreed to make good the value of the debased silver held by the foreign banks. Conditions were about restored to normality when the revolution of 1911–12 suddenly occurred, with an attending state of lawlessness in the surrounding country. Trade and credit again collapsed, and several years passed before business became flourishing. Still another question that affected the economic circles of Tientsin and that had been under litigation for many years was the financial complications of the salt merchants, which involved their insolvency. They had frequently borrowed from the foreign banks. These liabilities were raised in 1911 by a loan from the Ta Ching Bank for 7,000,000 taels under security of the salt controller.

Generally speaking, during the past decade good crops, coinciding with ready markets and high prices for farm produce, have greatly increased the well-being of the rural population. Furthermore, the opening up of Shansi and Mongolia increased the demand for foreign goods, which had a good effect on the import trade. But the remarkable expansion of the export trade has been the most important feature in the commercial development of this region, as it has increased the purchasing power of the natives generally and brought about a greater consumption of foreign goods. Other factors contributing to the development of the import trade were improved transportation and distribution facilities, and a generally more favorable attitude toward foreign goods than had existed before 1900. Though foreign goods are in more general use, there have been no radical changes in native customs and habits. Except among the official class and the more progressive merchants in the treaty ports, there is little indication as yet of any tendency on the part of the mass of the people to adopt foreign-style clothing, though foreign-style hats have undoubtedly come to stay. The demand for housing accommodations in the foreign concessions of Tientsin is growing, especially from the better-class Chinese; and as the demand exceeds the supply rents remain high. Building operations do not diminish in spite of the war's having advanced the cost of many materials. The price of land in the concessions is constantly rising, and ground which five years ago might be bought for $500 a mow (or one-sixth of an acre) now brings $3,000.

The shipping facilities in the ports of the district are satisfactory. Goods can be imported and distributed throughout the year. Tientsin is open to steamer trade for about nine months of the year, and when the port is closed in winter Chinwangtao serves as the entrepôt for foreign goods.

The methods of financing import business are similar to those obtaining with respect to exports, which have already been described.

Coolie hire in connection with the discharge of cargo is computed at about 2 cents per parcel, if the package is within a man's carrying power. In the import as in the export trade foreign merchants generally employ compradors to arrange business deals. The agreement between the import and export house and the comprador usually provides that the latter shall deposit $20,000 as security. The foreign merchant, on his part, obligates himself to pay, in addition to the allowance for the comprador's office, 2 per cent commission on all sales made through the comprador, as well as interest on the security deposited by the comprador, usually at the rate of 6 per cent per annum. The comprador is responsible for losses incurred through bad accounts. The Japanese transact business without a comprador, but generally more satisfactory results are obtained by following the comprador system.

IMPOSITION OF INTERNAL TAXES.

In disposing of goods to centers in the interior, Tientsin is conveniently located. There are numerous railways and waterways and the transshipping charges thereon are reasonable. A serious impediment to trade in the interior, however, is the imposition of internal taxes on goods in transit and at destination. All goods, foreign and native, even though covered by transit pass, are taxed whether carried by rail or water. Likin charges are levied at the numerous barriers en route, and an additional tax is imposed at the point of destination. In December, 1906, an effort was made to reform the system of inland taxation. The old multifarious likin taxes in Chihli were to be abolished, and in their stead were to be introduced a production tax and a destination tax. The attempt to get rid of the likin taxes failed, but the two taxes designed to replace the others have nevertheless become established. The former (production tax) is levied at the rate of 1½ per cent ad valorem on all kinds of native produce originating in the Province, the latter (destination tax) on foreign and native goods alike at the rate of 2 per cent ad valorem at the place where the goods are disposed for sale. The destination tax is not levied on grain, and only where it is stored for transport is a production tax of 1 per cent charged. The prices are fixed in a value list drawn up annually. There are some other special taxes, such as those on salt, wine, tobacco, opium, timber, plants, carts, live stock, pearls, and precious stones.

The lotishui, or destination tax, is perhaps the most common and vexatious of the internal taxes in the district. It is often excessive, and foreign merchants complain that as a result of these charges the prices for their products must be increased to an amount that tends to retard their business. The provincial authorities contend that foreigners should pay these taxes and then recover them in the prices charged the consumer; in that way, it is claimed, the taxes really fall not on the foreigner but on the native consumer. The foreign governments concerned have declined to recognize the validity of these inland levies, and the subject is continually in dispute between the Chinese authorities and the foreign consuls.

River dues are levied at Tientsin at the rate of 4 per cent of the import or export duty levied. In the case of goods arriving under exemption certificates from other ports in China the river dues leviable are 4 per cent of the duty paid at the port that issued the exemption certificate. Transit duty is levied on foreign goods being sent to the interior, and amounts to half of the import duties already paid. It is at the option of foreign and native merchants to clear foreign imports to an inland market by payment of a transit duty or by payment of the different charges demanded at the inland customhouses or likin stations. These charges generally amount to 1¼ per cent at each inland station passed, but no definite information can be given as to the amount of inland duty to which foreign goods not covered by a transit pass may be subjected.

STATISTICS OF FOREIGN GOODS IMPORTED.

The total value of foreign goods imported for the years 1904, 1913, and 1918 shows that it has nearly quadrupled, the statistics being as follows: 1904, $23,877,493; 1913, $51,757,269; and 1918, $88,054,054. This great advance in trade is to be attributed chiefly to the enhanced purchasing power of the people, and to the extended and improved means of communication, which have opened up vast regions to modern development.

The following table shows the quantity and value of the principal foreign articles imported at Tientsin through the Maritime Customs during 1904, 1913, and 1918:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
COTTON GOODS.						
Shirtings:						
Gray, plain.........pieces..	540,872	$880,806	472,228	$1,015,567	163,586	$935,231
White, plain..........do....	221,674	584,225	615,443	1,886,477	191,615	1,333,018
Sheetings, gray, plain....do....	798,482	2,178,632	1,520,497	4,099,178	572,583	3,221,224
Drills.....................do....	373,780	911,380	959,616	2,657,029	417,551	2,325,120
Jeans.....................do....	77,940	149,363	155,768	393,653	166,033	910,468
T-cloths..................do....	192,477	223,537	278,428	508,836	307,786	1,146,188
Cambrics, lawns, and muslins, white................pieces..	19,893	16,412	93,341	43,245	27,683	83,739
Printed cotton: Chintzes, plain cotton prints, and printed shirtings..............pieces..	146,477	353,857	335,886	489,044	196,893	955,017
Dyed cotton:						
Italians, plain; venetians, plain; sateens; poplins; italians, figured; poplins, figured; drills; cambrics, lawns, and muslins; Turkey red T-cloths, cambrics, and shirtings; shirtings and sheetings; cotton flannelettes; cotton blankets, etc.....pieces..	347,507	850,979	659,940	1,483,306	721,291	4,830,884
Cotton goods, unclassed..yards..	59,909	5,295	1,003,316	102,447	1,205,436	221,725
Velvets and velveteen...do....	49,703	9,880	300,375	62,035	435,660	216,808
Handkerchiefs, all kinds. dozens.	31,033	8,139	129,390	28,133	83,846	49,449
Towels, all kinds.........do....	165,093	44,087	315,194	75,941	182,578	918,982
Cotton yarn...........pounds..	19,744,280	2,441,513	49,422,267	6,983,129	32,683,999	13,519,110
Cotton thread on spools, 100 yards....................gross..	41,515	75,670	127,023	171,545	62,410	220,335
Cotton thread, unclassified pounds........................	(a)	(a)	24,267	11,190	64,133	30,514

a Unenumerated.

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
WOOL AND COTTON.						
Mixtures, all kinds	....	$55,119	....	$307,122	....	$285,401
Woolen goods, all kinds	....	141,214	....	152,559	....	223,081
Berlin wool........pounds	45,332	55,607	96,267	62,046	10,533	26,058
MISCELLANEOUS PIECE GOODS.						
Canvas, cotton duck, and hessian cloth........yards	202,592	14,108	1,261,249	166,050	601,608	101,849
Plushes and velvets...pounds	17,504	38,655	33,005	42,800	16,193	79,058
Silk piece goods........do	5,236	44,258	46,391	118,545	32,012	96,206
METALS AND MINERALS.						
Iron and mild steel, new and old, and lead, in pigs and bars........pounds	21,508,800	382,361	45,120,133	808,795	19,248,734	1,597,747
Tinned plates, plain......do	....	....	9,005,867	330,851	7,995,067	839,831
SUNDRIES.						
Acid, boracic........pounds	....	....	6,667	430	2,667	896
Bags, gunny, new and old pieces	125,255	9,045	1,837,721	139,776	753,000	88,689
Buttons, brass and fancy.gross	198,445	76,251	166,600	54,821	164,991	84,468
Candles........pounds	381,200	30,476	874,000	53,594	1,268,267	192,913
Cereals: Rice........do	593,200	11,011	41,184,133	970,001	12,355,200	645,761
Chemical products	....	13,276	....	31,638	....	36,033
Chinaware, coarse and fine pounds	330,668	28,193	701,600	34,769	1,237,734	154,461
Cigarettes, first and second quality........mille	....	245,445	1,056,450	1,498,051	1,344,394	4,274,794
Dyes, colors and paints.pounds	1,635,332	511,408	5,474,000	745,432	1,919,066	415,222
Dyes, aniline	....	....	....	868,543	....	136,177
Electrical materials, fans, lamps, and unclassed	....	25,774	....	210,680	....	542,344
Enameled ironware:						
Basins........dozen	2,395	8,274	38,103	88,091	37,684	125,729
Other kinds	....	....	....	25,584	....	50,613
Flour	....	....	....	385,187	....	37,442
Fruits and vegetables, preserved in tins........dozen	5,981	8,160	27,039	32,388	19,728	55,517
Gas plant and fittings	4,563	4,563	....	10,126	....	147,617
Glass plates, silvered; and window, common	....	28,286	....	185,102	....	349,870
Graphophones and accessories	....	3,598	....	25,825	....	17,109
Haberdashery and millinery	....	30,173	....	346,700	....	269,044
Hardware	....	58,650	....	145,885	....	244,391
India-rubber tires	....	2,665	....	58,331	....	102,908
Isinglass, vegetable ...pounds	85,068	28,633	88,933	24,048	42,400	30,350
Leather: Calf, kid and colored; cow; harness; sole; and unclassed........pounds	341,600	92,454	1,505,600	529,324	2,262,266	1,560,650
Machinery: Cotton-mill; printing; propelling (as boilers, turbines, etc.); parts of	....	93,840	....	328,005	....	745,268
Match-making materials pounds	....	....	5,270,667	141,131	10,595,467	656,625
Matches: Wood, safety, or other; Japanese........gross	4,102,496	589,330	3,154,136	457,812	1,521,363	453,747
Medicines........pounds	445,732	24,494	686,533	43,339	731,600	79,416
Medicines........value	....	49,239	....	156,588	....	310,448
Milk, condensed, in tins.dozen	16,451	13,842	67,766	80,139	47,008	100,946
Oil:						
Engine, mineral; kerosene, American, Sumatra, Japanese, in bulk and case, gallons	8,392,052	2,761,331	27,656,312	2,719,674	21,660,591	6,475,103
Castor, lubricating, gallons	....	....	185,600	4,410	....	239
Paper:						
Printing, calendered and sized........pounds	6,457,902	280,347	572,533	22,350	119,333	14,948
Printing, calendered and sized, Japanese.pounds	....	....	194,800	8,383	226,400	28,552
Printing, uncalendered and unsized....pounds	....	....	5,156,400	142,850	433,733	40,826
Printing uncalendered and unsized, Japanese pounds	....	....	3,666,067	105,973	6,794,133	655,929
Wall	....	10,194	....	19,430	....	24,641
Writing........pounds	....	....	118,933	9,670	214,400	41,666
Other kinds........do	....	....	13,356,533	425,718	....	596,202

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
SUNDRIES—continued.						
Railway materials	....	$1,376,412	....	$1,788,611	....	$939,004
Soap:						
Bar ... pounds	1,602,400	67,900	1,811,467	87,772	4,459,733	408,361
Toilet and fancy	....	57,355	....	104,518	....	194,485
Socks, cotton, first and second quality ... dozens	2,670	1,738	97,587	62,707	95,223	92,619
Soda, ash ... pounds	1,501,332	22,443	13,028,267	146,226	4,282,533	237,908
Stationery	....	37,743	....	135,043	....	161,864
Sugar: Brown, white, refined, candy ... pounds	55,959,200	1,400,133	114,552,400	3,149,483	121,853,600	7,769,997
Timber: Beams and logs:						
Softwood ... square feet	3,765,083	77,444	10,195,481	177,880	2,189,972	94,054
Hardwood and teakwood ... cubic feet	20,896	8,253	767,950	207,206	1,541,683	885,302
Timber:						
Piles and poles. square feet	a 56,002	61,432	8,605,578	188,461	20,342	971
Planks, softwood ... do	....	....	15,272,602	266,461	2,538,429	109,021
Railway sleepers ... pieces	....	....	489,885	384,475	194,310	419,158
Vehicles:						
Motor cars, and parts of	....	....	....	71,268	....	474,072
Railway carriages and wagons, and parts of	....	....	....	141,267	....	524,061
Watches ... number	21,063	57,813	12,488	12,341	661	1,549
Wine, beer, spirits, etc., in bottles ... dozen quarts	....	....	701	906	115,004	397,806
All other articles	....	6,204,724	....	11,741,808	....	21,254,675
Total net value	....	23,877,493	....	51,757,269	....	88,054,054

a Pieces.

INFLUENCE OF WAR ON IMPORT TRADE.

The import trade of this district since the beginning of the war has increased with Japan and the United States. With all other countries, especially those in Europe, it has decreased, owing chiefly to restrictions in production, exportation, and transportation. Generally speaking, since the war tonnage on the Pacific has been adequate for the needs of the trade. The import trade of Germany and Austria with the district has entirely ceased.

A favorable condition, affecting the import trade since the beginning of the war, is the high exchange value of silver. This advantage, however, has been offset to a considerable extent by the greatly increased prices of practically all commodities, due to the high cost of production abroad and to the high freight rates that have had to be paid in order to bring them to China. Another adverse factor is the scarcity of tonnage.

ARTICLES MOST URGENTLY NEEDED.

The development of Chinese industries has led to a demand for imported machinery. The manufacturers are in need of machinery for factories, mills, and mines. The Chinese Government requires foreign machinery to develop the railways, arsenals, mints, dockyards, and leather factories. Recently Chinese firms have ordered machinery and plant from America for two cotton mills in Tientsin. It is likely that orders for other mills will follow.

The most urgently needed articles for the Tientsin district after the war will include, of course, the staple American imports into this district—namely, kerosene, sewing machines, condensed milk, canned goods, packing-house products, certain of the finer grades of cotton fabrics, electrical machinery and fittings, structural steel, railway plant and material, and lumber. Other articles for which there will be an urgent, though limited, demand are paper, glass, chemical products, aniline dyes, stoves and grates, worsted and other woolen goods, leather and leather goods, soap and other toilet articles, medicines, hardware, metals, galvanized iron, roofing and flat sheets, enameled ware, ironware, and tobacco. In this category also belong machine tools for engineering, carpentry, iron forges, and bicycle and motor-car works, as well as hand machines for sewing, printing, knitting, hat making, grain cleaning, washing, and pumping. There will also be an appreciable demand for automobiles, bicycles, typewriters, furniture, agricultural implements, industrial machinery, knitting machines, mining and smelting apparatus, and other articles that usually find markets in a region of vast potentialities newly opened to modern development and foreign exploitation. Among articles for which there will be a constant demand, though not one of urgency, are watches and clocks, jewelry, graphophones and accessories, photographic materials, mirrors, wines, candles, lamps and lampware, clothing, hats, hosiery, and boots and shoes. The United States already participates to a considerable extent in supplying these lines, which offer a favorable field for extension. The chief competitors of the United States in the postwar trade of this market will be the countries of northern Europe and Japan. In many of these articles both Japan and certain of the European countries are ahead of the United States, so that in those lines Japanese and European products rather than American will supply the trade. The leading lines in which Japan has to a great extent replaced American and European goods in this market are piece goods, chemical products, electrical materials, paper, and, to a limited extent, manufactured dyes.

The most hopeful direction in which American manufacturers may look to overtake their European competitors would seem to be in the supply of electrical, railway, and mining materials, iron and steel manufactures, and, perhaps, at the end of the war, arms and munitions.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

Tientsin, situated at the junction of the Peiho and the Yuho, or Grand Canal, about 47 miles from the coast at Taku, is by far the leading port of the district. Taku to the southeast at the mouth of the Haiho is the port of Tientsin for large ocean-going steamers, and Chinwangtao to the east is Tientsin's auxiliary port in winter. With the extensive conservancy work carried on by the Haiho Conservancy, including the use of three ice breakers for the purpose of permitting navigation at the mouth of the Peiho to continue as far as possible into the winter (experience has shown that it is feasible to keep the bar channel open in normal winters), the shipping facilities of Tientsin are adequate for the needs of the port.

The port of Chinwangtao owes its existence to the Kailan Mining Administration. It is situated on the western coast of the Gulf of Liaotung, about 10 miles distant from Shanhaikwan. It is thus the natural distributing center for the northwestern part of Chihli. The bulk of the North China coast trade is attracted to the Peiho during the open season, but in winter, when the river throughout its whole course to Tientsin becomes impassable because of ice, the whole of the northern trade is conducted through the ice-free port of Chinwangtao. This port, with its splendid facilities, may be expected to attract more and more of the deep-sea shipping between the United States, Europe, and North China at all times. The breakwater, 1,950 feet in length, and the pier, 375 feet in length, are so constructed that vessels may lie alongside at any state of the tide and in all weathers, and discharge or load directly onto and from railway cars. There are seven berths, five at the breakwater and one on each side of the pier, and the railway tracks are so arranged that loading and discharging can be proceeded with independently at each berth. The berths along the pier have 21 feet of water at the lowest tides, but steamers drawing 25 feet can discharge with safety, provided they are prepared to take the mud at low water. There are three steam cranes available for weights up to 5 tons each. A branch railway runs from the pier to Tongho, 6 miles distant, on the main line of the Peking-Mukden Railway. Cargo can be discharged at the wharves into the cars of the Peking-Mukden line, thus insuring the loading of goods directly from steamer and transportation to destination without transshipment. Cargoes from Shanghai and elsewhere may be shipped on through bills of lading and passed through Chinwangtao under bond, obviating extra charges for go-down storage and railway reloading. Shipments of such cargo to Tientsin are received in the administration's depot, where delivery may be accepted and where there is extensive open storage and a certain amount of go-down accommodation. The administration maintains its own fleet of steamers, called the "Ping" line, which carry coal to other ports of China as well as to Japan.

Practically all the steamship companies engaged in China's foreign or coastwise trade have branches or agencies in Tientsin. In normal times ships of all the leading maritime nations enter and clear this port. The division of the port's shipping among the various flags shows that the Japanese flag exceeds all others, Great Britain, China, the United States, and Norway following in order. The tonnage credited to the last two countries is, comparatively, very small. The most notable feature is the number of ocean-going steamers for direct trade with foreign countries. Shortly before the outbreak of war several excellent steamers had been added to the regular trade of the port, and the average size of steamers coming to the Tientsin bund has been gradually increasing, but owing to the war the number of vessels reaching Tientsin has decreased considerably. The Compagnie des Messageries Maritimes withdrew its direct European service shortly after the outbreak of war, and the British Government requisitioned for war purposes many vessels of the various steamship companies of that nationality in the Far East. Tientsin was one of the ports touched at by the Volunteer Fleet of Russia in its regular service, which has long since been discontinued. Only the Japanese vessels to and from this port have increased in number. This increase is partly due to a new service recently inaugurated by the Dairen Kisen Kaisha between Tientsin and Dairen. As a result of the withdrawal of so many vessels the supply of tonnage is inadequate to meet the demand, which becomes greater as the volume of the foreign and domestic trade increases. This has caused high freight rates, but Tientsin has not been affected to the same extent as some other ports where the shortage in tonnage was more pronounced or made itself felt more promptly.

When a steamer enters the river on approaching Tientsin, a shipping pass is required, the cost thereof being at the rate of 0.05 tael per ton, and if the ship remains at Taku, at the rate of 0.025 tael per ton. Moreover, a mooring fee is charged at the rate of 0.03 tael per ton, while the wharfage fee on the Tientsin bund is 5 taels. These special taxes on shipping accrue to the Haiho Conservancy Board.

The regular services of the steamship companies operating to and from Tientsin are entirely local, the Tientsin lines merely connecting this port with other China ports and with Japan ports. No direct services are maintained to ports abroad; transshipment is necessary both for cargo and passengers, chiefly at Shanghai, Kobe, or Hongkong.

The chief local steamship services are:

Tientsin-Shanghai route:
  Indo-China Steam Navigation Co.; Jardine, Matheson & Co., agents.
  China Navigation Co.; Butterfield & Swire, agents.
  China Merchants Steam Navigation Co.; maintains a branch in Tientsin.
Tientsin-Kobe route:
  Nippon Yusen Kaisha; maintains a branch in Tientsin.
  Osaka Shosen Kaisha; maintains a branch in Tientsin.
Tientsin-Hongkong route:
  Indo-China Steam Navigation Co.; Jardine, Matheson & Co., agents.
  China Navigation Co.; Butterfield & Swire, agents.

Minor services are also maintained between Tientsin and Dairen, by the Dairen Kisen Kaisha, and to Newchwang, by the Nippon Yusen Kaisha.

Nearly all the principal steamship lines are represented in Tientsin, generally through agents, so that all necessary information and facilities are obtainable. The following leading shipping companies are represented and have offices in Tientsin:

Pacific Mail Steamship Co.
China Mail Steamship Co.
Canadian Pacific Ocean Services.
Messageries Maritimes.
Peninsular & Oriental Steam Navigation Co.
Glen and Shire Line.

For the conveyance of cargo from Taku bar to Tientsin, in cases where the steamers are too heavily laden to navigate the river, services are operated by the Taku Tug & Lighter Co. and the Tientsin Lighter Co. For navigating the river and crossing the bar, etc., the Taku Pilot Co. supplies pilots.

During the year 1918 the total number of steamers that entered and cleared the port of Tientsin was 1,609, with an aggregate tonnage of 1,598,292.

Among the forwarding agencies at Tientsin are the China Forwarding & Express Co., a Japanese concern, with branches at Peking and Tangku, and R. Sorelle, 17 Rue Courbet, Tientsin.

The International Sleeping Car Co. is a passenger and ticketing agency. It is established in Tientsin and Peking and operates, in normal times, the International Express and Trans-Siberian Passenger Traffic. Passengers are booked to the United States and Europe, and local travel tickets are issued for any part of the Far East.

FACILITIES FOR TRAVEL.

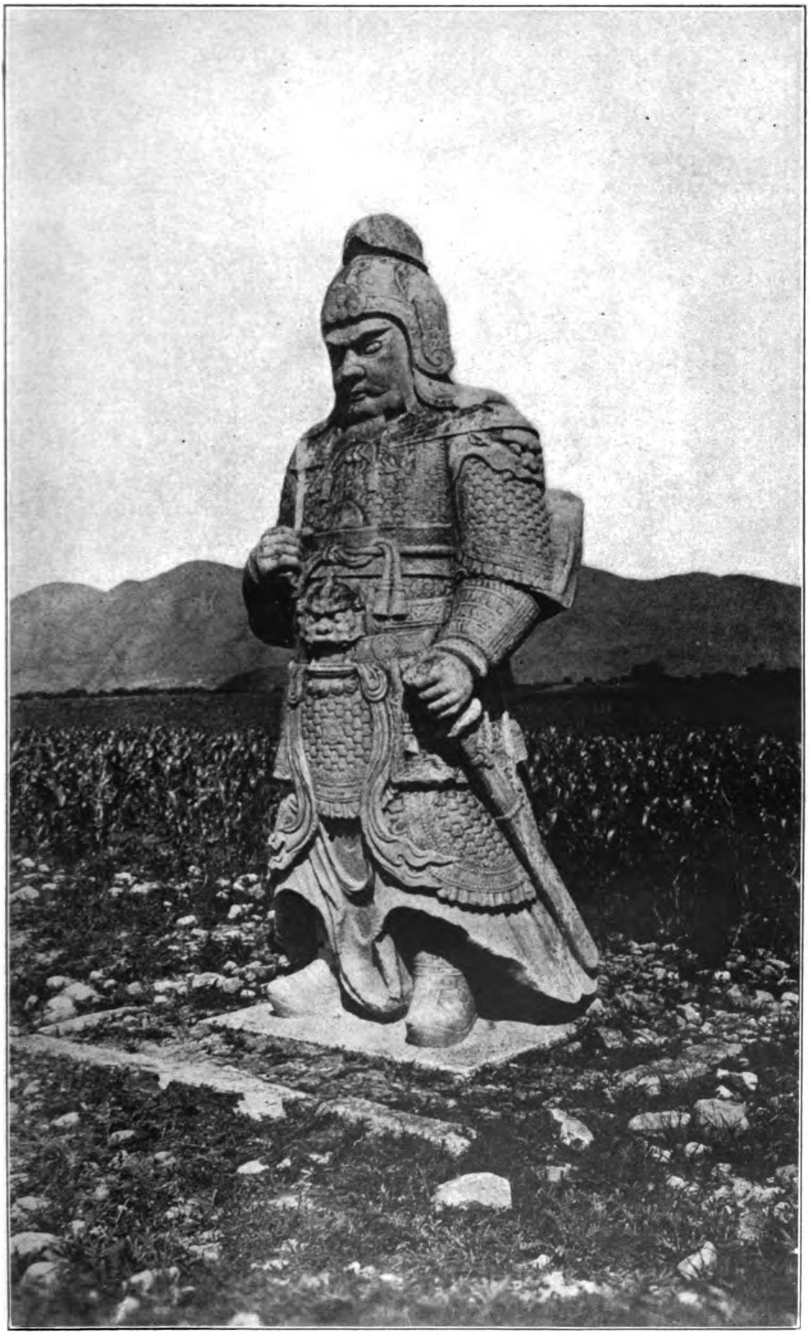
Modern hotels are found in the cities of the district much frequented by foreigners. Tientsin and Peking have several large foreign hotels. Those in Tientsin are the Astor House and the Imperial Hotel, and in Peking the Grand Hotel des Wagons-Lits and the Grand Hotel de Pekin. The Imperial Hotel of Tientsin conducts a branch in Shanhaikwan, and small seaside hotels are opened at Peitaiho and Chinwangtao during the summer months. The large hotels in Tientsin and Peking are in commodious buildings, furnished with electric light, water, and steam heat. These hotels have motor cars that attend the arrival and departure of trains, and in Tientsin of steamers as well. Guides are furnished for the convenience of visitors. The American and other foreign banks in Peking and Tientsin are in a position to accord banking facilities to the traveling public.

Living expenses have always been higher in this district than in other parts of China. Board and lodging at the principal hotels cost $8 Mex. per day and $200 Mex. per month. Table board by the month costs $55 Mex.

In Nankow, Kalgan, Shihchiachwang, Paotingfu, etc., there are no purely foreign hotels, but in each of these places there is a Chinese-owned hotel conducted in foreign style. The latter is quite distinct from the usual native inn. The furniture is semiforeign in design, and foreign foods and drinks are obtainable.

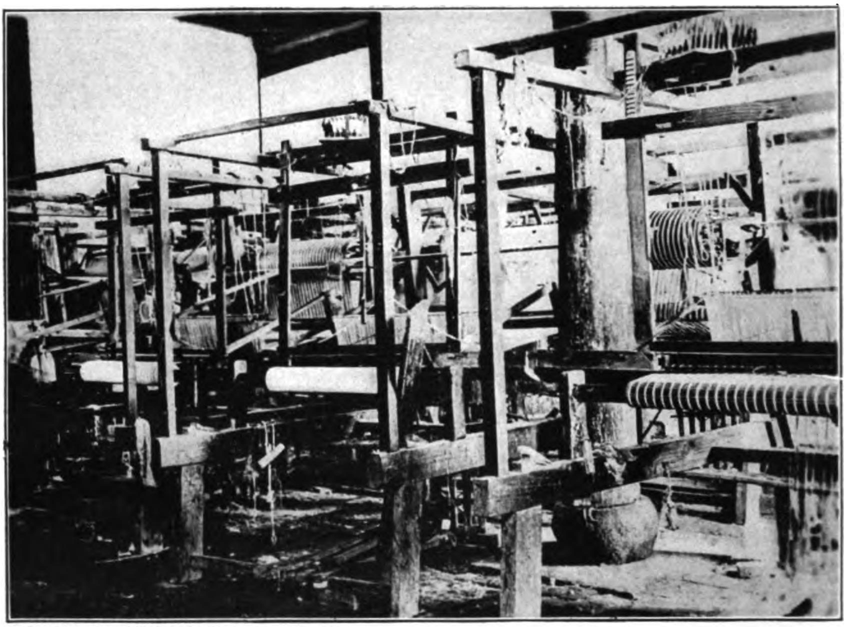
The best season for tourists is the autumn. In summer the cool air and bathing at the seaside places, Peitaiho, Shanhaikwan, and Chinwangtao, attract visitors from all over North China. For travelers within the district the railways constitute the only convenient means of communication. The Peking-Mukden Railway conducts a daily special train service during the summer months between the interior cities of Peking and Tientsin and the seaside resorts. First-class passenger trains with through baggage cars are operated, and excursion tickets are sold at a fare and a half for the round trip. The Tientsin-Pukow Railway is the quickest connection between Shanghai and Tientsin, but the steamer route between these ports is frequently preferred as being more comfortable. The trip takes three days, and the cost of a first-class ticket one way is $75. Along the Peking-Hankow Railway, which traverses the greater part of the Tientsin district, the traveler can see ancient walled cities, temples, and pagodas. Daily direct trains are operated over this route. The Peking-Suiyuan line carries the traveler in two hours from Peking to Nankow, when the Great Wall of China and the Ming Tombs may be seen. A foreign hotel is operated by the railway at Nankow, where chairs and guides may be secured for the tombs. The Cheng-Tai line, in connection with the through service of the Peking-Hankow Railway at Shihchiachwang, affords travelers an opportunity of seeing one of the most picturesque parts of China. The line passes through a mountainous section of country, rich in mineral resources, to the provincial capital of Shansi at Taiyuanfu.

In addition to the places mentioned above, there are others of absorbing interest to visitors. Tourists will find Peking, with its numerous walls, imperial palaces, temples, tombs, and parks, probably the most interesting city in the world. The most famous places are the Summer Palace, the Hunting Park, and the Temples



Photograph by E. M. Newman.

FIG. 32.—A GUARD AT THE MING TOMBS.



Photograph by E. M. Newman.

FIG. 33.—HAND LOOMS IN CHINA.

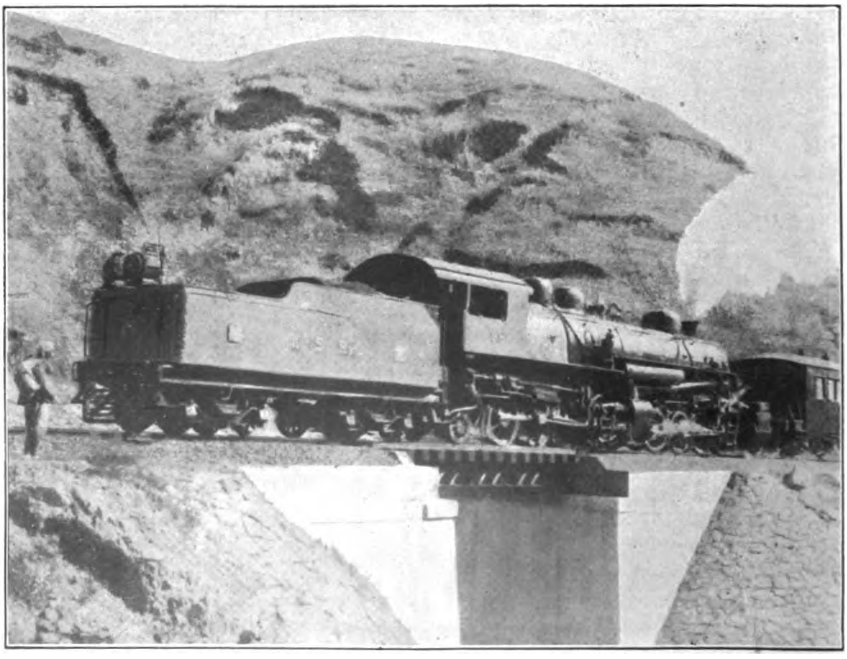


FIG. 34.—AMERICAN LOCOMOTIVE, NANKOW PASS, PEKING-KALGAN-SUIYUAN RAILWAY.

of Heaven and Agriculture situated in large open spaces south of the city. Other well-known objects in Peking are the Confucian Temple and the Lama Temple. There is a hot spring in Tangshan, near Peking. As the place is connected by motor road with Peking and has a new foreign-style hotel, it is becoming a favorite resort for foreigners and natives. Another delightful retreat in the environs of Peking is the Western Hills, 7 miles distant. They have recently been connected with Peking by a road specially designed for motor and light carriage traffic. The road was built under the auspices of the Ministry of Communications and is a continuation of the road to the Summer Palace. The trip by motor car from the Legation Quarter consumes about an hour. The authorities collect a toll on the road: For motor cars, 50 cents; for carriages, 30 cents; for jinrikishas, 3 cents; for pedestrians there is no charge.

Tientsin is the great trade center of North China, while Tangshan is the largest mining and industrial town in the district. In Jehol is a park surrounded by a battlemented wall 15 miles in length. The palaces and appurtenances occupy a vast space, and many old monasteries are located in this region. The western imperial tombs are situated close to the Liangkowchwang station on the Peking-Hankow Railway, 79 miles from Peking. Thus tourists can conveniently visit these tombs, which are beautifully situated in a region of wooded hills and clear streams.

The Chinese authorities render adequate protection to foreign travelers in the interior of the district.

TRADE ORGANIZATIONS IN DISTRICT.

All the cities and towns of this district have a Chinese Chamber of Commerce. In Chihli Province, the leading chambers are to be found in Tientsin, Peking, Paotingfu, and Kalgan. There are 61 branch chambers. There is a chamber at Jehol with 4 branches. In Shansi Province the head chamber is at Taiyuanfu, with 22 branches in the other towns of the Province. These institutions, which are wholly Chinese in origin and development, exist primarily for the object of promoting the trade and other interests of their members, who are the leading local merchants. The power and authority wielded by them are derived chiefly through their mode of organization; for they are essentially federations of the trade and artisans' guilds of their localities. Each guild elects directors to manage its affairs, and these directors, ex officio, become members of the local chamber of commerce. The Tientsin Chinese Chamber of Commerce is an institution of great power and influence, and these are exerted in a variety of ways. It plays a prominent part in the discussion and decision of every public question—political and social as well as economic. It even aids the Government at times in enforcing the laws.

The foreign merchants of the leading commercial powers in Tientsin have formed individual chambers of commerce; for instance, there are the American, the British, the French, and the Japanese chambers of commerce to safeguard their respective trade interests. In a number of instances the local chamber is a branch of the central chamber for China, usually located at Shanghai. In addition to the separate chambers in Tientsin, there is also a General Chamber of Commerce composed of the leading foreign merchants of all nationalities. All questions pertaining to general trade conditions and calling for governmental action, whether Chinese or foreign, originate as a rule with one of the chambers and are first submitted to a committee thereof for consideration. If such action is deemed necessary, the chamber will refer the subject to the consular body for action. The consular body may then open negotiations with the local Chinese authorities or else refer the question to the diplomatic corps at Peking with a recommendation that representations be made to the central Government.

The Chinese Chamber of Commerce and the foreign chambers cooperate in measures for the common good and for the improvement of trade methods, both native and foreign.

There are also in Tientsin a number of guilds organized by Chinese merchants dealing in certain commodities for the purpose of facilitating business transactions. There are artisans' guilds as well. The principal trade guilds are those having to do with wool, hides, skins and furs, bristles, cotton, walnuts, groundnuts, and seeds. The original purpose in establishing these guilds is to avoid competition among native sellers in transactions with foreign merchants, and as a consequence thereof foreign buyers are often confronted with the decision of the members of the guilds to hold stocks for higher prices.

In addition, there are various public organizations in Tientsin formed by foreign merchants who have a vested interest therein; conspicuous among those producing results beneficial to trade is the Tientsin Antiadulteration Society, which prevents evil practices in the preparation of wool, cotton, etc., for the foreign markets.

AMERICAN INTERESTS.

Ever since the treaties of 1860, by which diplomatic intercourse was established with Peking and Tientsin was opened to foreign residence and enterprise, the relationship between the United States and North China has been close and extensive. The demonstrated unselfishness of American missionary activity, the nonaggressive methods pursued by American merchants, and the justice and reasonableness of the governmental support accorded them, as well as the constant and very real diplomatic assistance extended China by the United States, have served to convince the Chinese that the American Government and people are actuated by an earnest desire to be helpful to China. During 60 years of the most cordial relations they have been given abundant proof of the sincerity of America's friendship and the equity of its conduct. As a consequence, the Chinese are more favorably disposed toward Americans than toward other foreigners. They trust the Americans as they do no other people. Naturally, under such favorable conditions American interests in this district—missionary, commercial, educational, charitable, and social—have developed to a greater degree than those of other foreign countries.

There were on December 31, 1917, 1,043 Americans, excluding the military, in this district; more than half are connected with the various kinds of mission work. The other American residents are engaged in trade, except the few in the employ of the Chinese Government in connection with the railways, customs, salt administration, post office, and other services, and those engaged in educational work in the numerous native schools, colleges, and universities.

American missionaries are widely located over the district. Their work is being conducted along evangelical, educational, and medical lines. They have been a leading factor in the reform movement in this section of China. They have erected churches and chapels, schools, hospitals, and have created agencies and publication societies for the diffusion of western knowledge and the dissemination of western literature. The principal American missions are the following:

American Board of Commissioners for Foreign Missions.
American Episcopal Mission.
American Presbyterian Mission.
Apostolic Mission.
Board of Foreign Missions of the General Committee of Mennonites of North America.
China Mennonite Mission.
Church of the Brethren.
Foreign Mission Board of the Baptist Convention.
General Mission Board of the Pentecostal Church of the Nazarene.
Independent Mission.
International Reform Mission.
Methodist Episcopal Mission.
Methodist Protestant Mission.
National Holiness Mission.
Scandinavian Alliance Mission.
South Chihli Mission.
Young Men's Christian Association and Young Women's Christian Association.

American missionary interests compare favorably with those of other countries represented in this field. In fact, more than one-half of the missionary activity in North China is American.

There are several secular associations in this district whose members embrace Chinese and Americans, such as the American Returned Student Club, the University Club, and the Chinese Political and Social Science Association, all of which result in bringing into a closer relationship Americans and foreign-educated Chinese. The Young Men's Christian Association and Young Women's Christian Association, established in Peking and Tientsin, have social-service clubs attached. They conduct night schools and maintain classes in athletics. Mention should be made of the Tsinghua College, Peking, an educational institution maintained at Government expense for preparing Chinese youths for entrance into American colleges and universities, in accordance with an undertaking given by China to the United States at the time the latter remitted a portion of its share of the Boxer indemity. Practically all the instructors in the Tsinghua College are American.

Most of the Americans doing business in the Tientsin district are engaged in the importation of oil, tobacco, iron and steel, machinery, provisions, canned goods, general merchandise, etc., and the exportation of wool, skins, hides, bristles, straw braid, cotton, walnuts, peanuts, etc.

Since the outbreak of the war American trade with the district has greatly developed, while the number of American firms and Americans connected therewith has increased twofold. There are at present 27 American firms in Tientsin and 5 in Peking. The trade (and the nationals engaged therein) of all other countries except

Japan have decreased. The Japanese alone, of the foreign residents in the district, outnumber the Americans.

American merchants have possessed exceptional advantages in recent years, in that, with the sole exception of Japan, they have been relieved from the pressure of strong competitors. American trade in many lines has obtained a good and, it is to be hoped, permanent footing in Tientsin and Peking; moreover, the field open to American exploitation is gradually being extended to northern Chihli, Inner Mongolia, and Shansi.

Promising fields for American commercial activity are described at length under the headings of "Import Trade" (p. 335) and "General Trade Suggestions."

In North China American commerce has been intrenched by 60 years of effort. American merchants and missionaries have extended American enterprise throughout this whole region, while the majority of the Chinese students in American educational institutions have come from the northern Provinces, and it has been a matter of frequent comment that the influence of no other nation has been so great. The United States is directly interested, therefore, in the peaceful development of this section of China. In the impending industrial awakening of North China and in the coming struggle for commercial success, American energy and capital may be expected to assert vigorously their right of participation.

GENERAL TRADE SUGGESTIONS.

It is believed that the present is an especially favorable time for American manufacturers and exporters to seek the extension of their existing trade and the introduction of new products in the Tientsin district. A most important step to this end would be to carry stocks at distributing centers and to conduct business directly with the native consumer. While there are a number of American firms in Tientsin in certain lines following this method, thus eliminating all unnecessary charges, yet many items of American manufacture finding a market there are carried in stock at Shanghai and at Japanese ports and distributed in North China through native merchants; other items are ordered spasmodically through local commission merchants or middlemen.

The development of trade in modern manufactures, machinery, household conveniences, farming implements, etc., is not so much a matter of competition as of education and the creation of a demand. That the Chinese do not take quickly to foreign innovations is probably due to their instinctive desire to avoid experiments that may prove expensive and fruitless, but they are not slow to adopt new methods, when convinced that there is advantage or profit in doing so. The development of markets under existing conditions, therefore, necessitates acquaintance with the peculiar customs and requirements through demonstrations and close and constant touch with the trade. In a number of lines American products are becoming better known and consequently gaining ground.

With a view to making the conduct of direct business more general in this district, American manufacturers, or a combination of manufacturers, exporters, financiers, and steamship companies, interested in Far Eastern trade, should establish extensive distributing or selling organizations in Tientsin with agencies at the principal markets in the interior. The parties concerned, which may comprise those interested in competitive or noncompetitive articles, should cooperate in sending out to North China representatives to go over the field with this object in view. The organization should have its own technical experts and salesmen, offer goods suited to the markets, carry stocks at the distributing centers from which any quantity desired can be sold, give away samples, advertise extensively, and grant the customary credits. In order to build up a corps of trained salesmen the organization should send out young men who would come prepared to learn the language and customs of the people, to familiarize themselves with local conditions, to make the service a life career, and to cooperate with Chinese assistants. In most lines it is believed that such a distributing system, if intelligently handled, would lead to the development of these markets, and that the plan could be adopted with profit and with a prospect of permanence. It might be found profitable to conduct a joint import and export trade as the best method of minimizing the risks attendant upon the wide fluctuations in exchange values.

Many Tientsin importers and merchants who have studied trade conditions in North China are of the opinion that there are several lines of American goods for which fair markets could be developed if the enterprise is energetically undertaken in the right way. North China has already witnessed a great development in railways, and, to a less marked extent, in mines, electrical plants, public utilities, and modern factories. These industries are constantly being extended, and there is reason to believe that the region is at the inception of a vast modern industrial development and will require additional railway, mining, and electrical materials, as well as these going into public utilities and factories. Machinery and metal products will be in great demand. Other articles for which there is a promising field are cotton woven fabrics, stoves, roofing, hardware, canned goods, provisions, dry goods, and general merchandise.

American manufacturers in leading lines, until the cooperative plan above described is inaugurated, should have their own branches in China, and those not having their own representatives there should intrust their interests to American firms with organizations in the field. Chinese merchants wonder at the employment of foreign representatives for American houses.

Chinese officials and merchants are anxious that American business houses shall establish distinctively American branches or agencies in this and other parts of North China. They invite American capital to be used in developing commercial and industrial enterprises there and urge that direct transportation facilities with the United States be arranged. The Chinese, however, would expect the American firms to be financed purely with American capital, and to conduct business according to strictly American methods.

The lack of direct shipping as well as adequate banking facilities, together with the absence of cooperative selling and distributing organizations, constitute the chief obstacles to the development of American trade in this region. Under present conditions American manufacturers are compelled to look to their natural competitors to convey their products to the country of destination, to negotiate the drafts and credits connected with the transaction, and finally to dispose of the goods. American ships, American capital, American organizations are necessary to trade expansion in North China. Though this field is being systematically exploited by their competitors, yet with serious concerted effort American manufacturers and exporters may expect to participate in the trade and thus share the prosperity of the district.

In promoting investments of American capital in North China it may be advisable as well as practicable for American financial interests in a restricted number of lines, such as railway and mining enterprises and loans to the Chinese Government for the development of industries or for purely administrative purposes, to cooperate with the leading countries of Europe and the Far East.

AMOY CONSULAR DISTRICT.

By Consul Clarence E. Gauss.

LOCATION AND AREA.

The Amoy consular district includes the southern two-fifths of the Province of Fukien. The port of Amoy lies in latitude 24° north and longitude 118° east; the latitude is approximately the same as that of Key West, Fla.

The district has an estimated area of about 20,000 square miles, or about the same as the States of New Hampshire and Vermont combined.

POPULATION.

On the basis of the Minchengpu census of 1910, it is estimated that the population of the Amoy consular district is about 6,000,000, making the density of population about 300 to the square mile. This might be compared to the density of population in New Jersey, placed by the 1910 census at 337.

This consular district supplies a heavy percentage of the Chinese emigrants going abroad; in consequence the number of young, able-bodied men in the district is below normal, with a corresponding effect on the population.

Practically the entire population lives in towns or villages. While a very large percentage is engaged in agricultural pursuits, the land is worked largely by clans, and the members of each clan or of several clans establish themselves in small villages adjacent to the tracts they cultivate.

Of the principal cities of the district, Amoy claims a population of 114,000, Changchow 100,000, Chuanchow 70,000, and Anhai 25,000. There are numerous small cities and towns.

In 1917 the foreign population of the Amoy district, according to the customs statistics, was 3,885, including 3,154 Japanese, 423 British, and 158 Americans. Of the 396 foreign firms in 1917, as compared with 260 in 1916, 310 were Japanese, 48 British, 18 French, and 9 American. The foreign residents and firms include persons of Chinese origin or descent who are citizens, subjects, or protégés of the nationalities indicated.

PHYSICAL FEATURES.

The Amoy consular district is mountainous, with the special characteristic that the chains are parallel and run from southwest to northeast. The rivers are short, and rapids frequently occur except within a few miles of the coast, where there is often insufficient current to keep open a proper channel.

Topographically this district has been described as similar to western South Carolina and northern Georgia.

CLIMATE.

The climate of Fukien Province is semitropical in the eastern portion; in the extreme west it varies more toward the temperate. Along the coasts frosts rarely occur. January to March are the coldest months of the year. From about February to June rains are frequent and often torrential. The average annual rainfall at Amoy is about 48 inches. July, August, and September bring an oppressive heat, the thermometer at Amoy rising at times as high as 100.2° and the humidity registering 88. During the summer and autumn months typhoons appear but usually strike Amoy with diminished force owing to the nature of the coast line and the partial protection afforded by the island of Formosa. From the middle of October until the middle of January the climate at Amoy is generally cool and otherwise agreeable. Climatically, Amoy has been described as similar to Key West, Fla.

POLITICAL SUBDIVISIONS.

This district includes the political subdivisions or prefectures of Tingchowfu, Changchowfu, and Chuanchowfu, with the independent subprefecture of Lungyenchow—a total of 28 hsien or counties, under the control of two taoyin, or subgovernors, who are subordinate to the civil governor at Foochow, the capital. The taoyin at Amoy administers the prefectures of Chuanchowfu and Hsinghuafu as well as Yungchunhsien (the two latter in the Foochow consular district). The taoyin at Changchow, about 33 miles inland from Amoy, controls the prefectures of Tingchowfu, Changchowfu, and the independent subprefecture of Lungyenchow.

Under the supervision of each taoyin there is a magistrate for each hsien or county.

At Amoy, with a district covering southern Fukien, a commissioner of foreign affairs holds office, serving also as Chinese superintendent of the Maritime Customs. He is appointed by the central Government and takes rank with the taoyin. He has no definite control, however, over the magistrates, and in consequence his authority is weakened. While his office is the nominal channel for all intercourse with foreigners, as a matter of practice the foreign consuls frequently deal directly with the taoyins and local magistrates, having recourse when necessary to the civil governor at Foochow.

Southern Fukien is a separate military department under the military governor at Foochow, the department commander stationed at Amoy having the rank of a major general and commanding about 5,000 troops.

The various districts are represented in the provincial assembly at Foochow, but there are no local assemblies except that some of the villages and towns have what are known as self-governing bodies, and every village has its village elders or headmen.

For the most part, all authority is centered in the governor, taoyins and hsien magistrates and is enforced, when necessary, with the assistance of the military.

The judicial authority is vested in the hsien magistrates in the absence of the establishment of a regular judicial system in this part of the Province. The hsien magistrates have assistants with legal training attached to their yamens to act for them in judicial matters. A district court was in operation at Amoy up to 1912, but suspended on account of lack of appropriations. The reestablishment of this court has now been sanctioned.

Appeals are taken from the magistrates' courts either to the district court or the supreme court at Foochow, according to the nature of the case, but in mixed cases involving foreign interests appeals have been taken to the special commissioner of foreign affairs at Foochow, although this procedure has not received the formal sanction of the consular body at Amoy.

Independent police forces are maintained in the larger cities, under the control of the hsien magistrates, and in some cases a water police has been established for control of the harbors from the police standpoint.

EDUCATION.

Considerable progress has been made in education in the last decade, the two outstanding features being the establishment of public schools in cities and towns of importance and the effort to improve the curricula in Chinese schools by substituting mathematics, geography, and other practical branches for part of the study of the Chinese literature and classics, to which Chinese schools were largely confined in the past.

Some difficulty has been experienced in obtaining competent instructors; students from missionary institutions are being drawn very largely into this work, a feature that should bring wholesome results.

The Government schools are supported partly by grants from the provincial and local treasuries, partly by private subscriptions, and to some extent by tuition fees.

The following table, taken from a report covering Fukien Province, will serve to indicate in an approximate way the extent of the Chinese educational activities under Government supervision in the Amoy consular district:

Class of schools.	Number.	Number of students.	Number of teachers.	Revenue.	Expenditure.
				$ Mex.	*$ Mex.*
Normal	2	130	10	7,213	12,061
Middle	7	868	61	47,080	51,445
Grammar	290	8,130	1,365	207,380	252,399
Primary	570	25,312	847	82,547	97,765
Commercial	3	217	15	6,270	6,714
Half-day	3	188	3	160	198
Total	875	34,845	2,301	350,650	420,582

In United States currency the revenue and expenditure given above amount (at normal exchange) to about $175,325 and $210,291, respectively.

Considering that a decade ago the Government maintained practically no schools, the figures indicate a most gratifying advance along educational lines.

One particularly pleasing feature has been the establishment of a limited number of schools for girls. Formerly Chinese girls were generally uneducated and in a condition of complete dependence, but the influence of the foreign mission schools for girls has been felt and is shown in the efforts to establish Government schools for them.

The mission schools report continued progress. One American mission in this district maintains 3 kindergartens, 30 lower elementary schools, 4 higher elementary schools, and 1 middle school, with a total teaching staff of 2 foreign men, 6 foreign women, and 118 Chinese instructors. Another mission maintains 7 boys' schools, with a teaching staff of 1 American and 9 Chinese and a total enrollment of 175 pupils, and 3 girls' schools, with 3 teachers and 85 pupils.

English missionaries conduct 3 kindergartens, with 268 pupils; 51 lower elementary schools, with 1,366 male and 636 female pupils; 7 higher elementary schools, with 138 male and 47 female pupils; 1 middle school, with 47 pupils; and a college (of high-school grade), with 180 students. The total teaching staff consists of 5 foreign men, 7 foreign women, and 27 Chinese.

Besides these missionary educational activities, there are others, including the Roman Catholic, for which statistics are not available, but which are understood to be quite extensive, as well as the educational work of the Young Men's Christian Association.

There are also a number of private schools in various sections of the Amoy district. Tung Wen Institute at Amoy is probably the largest of these. This school, of academy grade, was established some years ago by an American consul in conjunction with a group of public-spirited Chinese. The institute has prospered, and plans have been maturing to raise it to full college grade. The superintendent is an American, and there are two American instructors. The Chinese teaching staff numbers nine. The enrollment is about 275 pupils. This institution is supported entirely by endowment of the Chinese gentry and by tuition fees. The American consul is ex officio chairman of the board of trustees and the local commissioner of customs is vice chairman. The board of trustees includes a number of Philippine and Singapore Chinese of considerable wealth.

The Chinese schools depend almost entirely on Chinese and Japanese manufacturers for their supplies and equipment. The schools under foreign supervision are supplied either from home (including the United States) or from depots at Shanghai or Hongkong maintained under mission auspices.

There is room for considerable advance in the use of modern school equipment and supplies, but the funds available for educational purposes are limited and there is not now much prospect of any noteworthy increase in this line.

There is at this time no higher technical institution available in this district for Amoy Chinese. The mission hospitals undertake medical instruction of a useful and practical character, the students studying under foreign physicians in charge. Hospital supplies are drawn principally from Hongkong and Shanghai, and in some cases directly from the United States and England. The American mission hospitals at Amoy have recently been considerably enlarged. They use American hospital equipment and supplies, so far as possible.

AGRICULTURE.

South Fukien is one of the least developed parts of China. The country is broken and mountainous, the hill ranges having flat irrigable valleys at their base. The soil on the hills is, for the most part, stiff, poor, and thin, there being little or no surface soil remaining.

The soil in the valleys is the surface soil washed down from the hillsides, and must once have been fairly fertile; but ages of constant cultivation have so impoverished it that fertilizers are now constantly required.

Agriculture, however, is the most important industry of the district and it has been estimated that approximately 60 per cent of the population is engaged in this pursuit.

Rice, tobacco, sugar cane, sweet potatoes, fruits, narcissus bulbs, and garden vegetables are principally cultivated. Two and sometimes three crops are raised annually in this district.

Rice is grown principally in the Changchow prefecture. By a system of terraces, rice may be cultivated even to the summits of steep hills. The average annual yield in the Changchow prefecture has been estimated at about 40,000 tons. The rice crop in this consular district, however, is not sufficient to supply the local demand and there is an annual importation of foreign rice to the extent of 25,000 to 30,000 tons annually.

Sugar cane is grown principally in Changchow prefecture and in Tunganhsien, although it can be raised all along the coast of Fukien Province. Sugar-cane growing, however, has gradually declined, and whereas a decade ago (or less) considerable quantities were exported, the annual export, which goes now to North China principally, is in the neighborhood of only 3,000 tons, and refined and white sugar is imported from foreign ports.

Observing conditions in Formosa, the Chinese in the Amoy district were encouraged at one time to believe that a thriving sugar industry could be developed there, but it was soon found that with the comparatively high cost of labor, the foreign competition, and the lack of transportation facilities in the interior of the Province, the venture could not be successful, and the production has consequently fallen off.

Tobacco is raised principally in Changchow and Tingchow prefectures, and the portion exported goes principally to Formosa, Java, and the Straits Settlements. Amoy participates to the extent of about 8½ per cent, or $450,000 United States currency, in the foreign and domestic trade in native tobacco.

Both black and green teas are produced in the district, but the quantities are unimportant—amounting, in fact, to less than 1 per cent of the total production in all China. In the sixties and seventies of the last century the Amoy district produced large quantities of Amoy oolong tea. In 1874–75 more than 7,500,000 pounds of this tea went to the United States. But the tea was of poor quality, adulterated, and, moreover, heavily taxed. Other countries were coming into the market with teas of better grade. The tea trade steadily declined until in 1899 the chapter closed with the last shipment of Amoy tea to the United States, 31,705 pounds. Except for small quantities now sent to the Chinese emigrants in the Straits Settlements, etc., the trade in Amoy tea is dead, and towns and large districts once full of life and movement have become ruined and deserted. The annual export now amounts to 400 or 500 tons, valued at about $100,000 United States currency.

With the decline in the trade in Amoy teas, the foreign merchants turned to the exportation of Formosan teas, for which the market grew, and Amoy continued for a long period of years to be a flourishing tea port. Although the Amoy firms had their tasters in Formosa, the tea was settled, warehoused, and shipped from Amoy. This was partly because the foreign and Chinese merchants had their establishments and godowns there but mainly on account of the excellence of the harbor at Amoy and the lack of suitable harbor facilities in Formosa. Even for some years after the occupation of Formosa by the Japanese and the cession of that island to Japan at the close of the Chino-Japanese war, the trade centered at Amoy, but with the reconstruction of the railway from Taipeh to Keelung in Formosa, the establishment of new firms in northern Formosa, the efforts of the Japanese administration to improve the harbor of Keelung, and the advantage of the gold standard, the market gradually moved its center to Keelung. In 1905 about 55 per cent of the Formosan tea was still sent to the United States through Amoy. During the decade that followed the trade finally slipped away from the Chinese port, and Amoy, once prominent in the commerce of China as a principal tea port, has relapsed into a position of minor importance in the trade of the Republic.

The principal fruits grown in the district are pomelos, oranges, lungngans, pears, plums, bananas, peaches, and persimmons. The fruit comes principally from the Changchow region, which is the richest agricultural section of the district. The pomelo, for which Amoy is celebrated, comes from Pohlam. There is a limited exportation of fruits to other Chinese ports, and tinned fruits and dried lungngans go abroad for the consumption of Amoy Chinese overseas.

Cereals, other than rice, have practically no place in the agricultural products of the district, although some wheat is raised. About half a million dollars' worth of wheat flour, principally Chinese, is imported annually.

Narcissus bulbs, called by the Chinese "shui hsien hua-t'ou," are grown in this district at Yuanshan, close to the south gate of the city of Changchow. They form the only article of export from Amoy to the mainland of the United States. This flower, it is understood, was imported from Holland in the latter part of the sixteenth century and has been grown more successfully in the Changchow district than elsewhere in China. The bulbs are generally planted in the autumn, from September to November, and gathered in the third year following. Some disagreement between growers and buyers has arisen during the past few years, and the trade has also suffered somewhat on account of taxation. The normal annual export, of late years, is about 1,000,000 or 1,500,000 pieces. The value, however, is only about $16,000. Most of the bulbs exported go to the United States and Canada.

The methods of farming and the implements used are very primitive. The fields are generally cultivated by hand with rude hoes, though in some instances wooden plows (one-handled, single stock, with a plowshare of hardwood or iron) and wooden-tooth harrows are used.

These are drawn either by water buffalos or by an animal that is known locally as a cow but is in fact a hybrid yak. Both the male and female animals are used for this purpose.

The buffalos and yaks are also the dairy animals throughout southern Fukien. Hogs are raised on a large scale, and poultry is found in every farmyard.

Agricultural lands are held to a large extent by clans, who maintain something of a community system, everything pertaining to the farm life being as a rule directed by the head of the clan. Loans and mortgages on crops are frequently made, usually at very high rates of interest, and in the case of leased land the rental is usually paid by the first crop, remaining crops belonging to the renter. Commission merchants are not unknown, but they do not represent any organized business.

Constant fertilizing of the soil is necessary. Manures and excreta are used, and bean cake is imported from Manchuria and North China. In 1915 the importation of bean cake at Amoy amounted to about $1,500,000 United States currency in value, and in 1913 it reached $1,800,000.

FISHERIES.

Enjoying an extensive coast line with numerous bays and harbors, Fukien Province is well fitted for producing a sturdy race of fishermen. The waters abound in fish of various kinds, the annual catch including the haretail (in the spring), the small seabream (in the summer), and the seabream (in the winter) as the principal fish of the seasons. Oysters, shrimps, and prawns are also to be had. The best estimates from native sources place the annual catch at about 500,000 pounds.

MINERALS.

Judged from the geological aspect, the richness of the mineral deposits of south Fukien is generally admitted; abundant outcrops of coal, iron, and correlative minerals are found in the several districts; but the lack of transportation facilities has so far proved an insurmountable obstacle to the exploitation of this mineral wealth.

The following notes on the minerals found in this district are from the Customs Decennial Reports (1902–1911):

Anki district.—At a distance of some 50 miles by waterway from Chuanchowfu, extensive veins of coal, iron, galena, zinc blende, and limestone are exposed to view. The coal is bituminous, producing a short flame with high temperature. In places the outcrop of coal is from 3 to 6 feet in thickness; worked by native methods, it supplies fuel to the surrounding villages. The repetition of seams is unknown. Iron mines are abundant; according to a native expert the ore is said to contain 70 per cent of iron. Galena is also rich, a sample assayed having shown 1 ounce ore and three-quarters of an ounce lead. Zinc blende has also been discovered. Gold is supposed to exist in this district, but no authentic information is available.

Lungyenchow district.—Extensive coal fields and iron beds are found in this district. The geological formation and mineral deposits are similar to those in the Anki district. The distance from the nearest seaport is about 120 miles.

Anthracite coal seams lie everywhere exposed to view, varying in thickness from 3 to 9 feet. Coal is so abundant in this district that even the poorest keep fires alight day and night, as rekindling is found more expensive. The price on the spot is only 4 to 8 cents per picul (133⅓ pounds). A sample seen by the writer contains at least 90 per cent of fixed carbon, with brilliant luster. It burns with a very short flame, producing a strong heat. It is superior to Pinghsiang hard coal, which is much used in the Yangtze Valley, and would make an excellent coal for iron-smelting purposes and for household use. Coal fields intertraversed with limestone and metallic veins seem to cover the whole of the chow (prefecture), extending even to Engteng, where outcrops of a similar variety of coal are worked.

Rich iron beds extend far and wide. At present three mines are in operation, but are worked by the most primitive methods, with an output of only 150 to 200 piculs per day.

Tingchowfu, Shaowufu, and Kienningfu districts.—In Tingchowfu district coal seams extend from Tsinglinhsien to Lienchenghsien, and near to Shaowufu outcrops of coal and iron are worked. Once a rich coal mine was said to have been in active operation near Kienningfu, but owing to reckless digging the pit collapsed and the workmen were buried alive * * *.

Thus it will be seen that a vast, uniform, and continuous coal field, with its correlative iron and other minerals, covers nearly all the southern districts of Fukien, extending to Kiangsi. Dips and strikes, folds, and faults of the veins must be solved by experts.

To exploitation of mineral wealth Amoy must now look to regain the former commercial prosperity enjoyed when it was a tea port. At present, lack of transportation facilities absolutely prohibits development, and the prospects of early exploitation are not bright.

Besides the lack of transportation facilities, several reasons have been assigned for the failure to open up the mineral wealth of the district, among them being fear of foreign aggression, mutual suspicion among the Chinese themselves in joint enterprises without foreign capital, and the unsatisfactory state of the mining laws, which has so far largely discouraged the participation of foreign capital.

The attitude toward possible American participation in the development of the mineral wealth of the Province is decidedly favorable, and such participation would mean, of course, the extensive use of American mining machinery and equipment. Political considerations and the mining laws, however, must be taken into account.

COMMUNICATIONS: PATHS AND WATERWAYS.

The transportation facilities in southern Fukien connecting the principal cities and towns with the principal seaport, Amoy, are decidedly limited; and as regards general transportation into the interior, it may be said that this is one of the chief problems confronting the people of this section.

So far as South China is concerned, there are no roads. The nearest approach to a road, generally speaking, is a narrow footpath, raised about a foot above the fields. As expressed by one writer: "The only commissioner of these highways is the tramp of ceaseless thousands bearing their heavy burdens over them, from one generation to another. One never expects them to be kept in good order. No fences mark their boundary, no signposts their direction." And yet, into many parts of the district, the only means of transportation is by burden bearers over these narrow paths, unpaved and often impassable.

The district is equally poorly equipped for water transportation. The Kiulungkiang, entering the sea at Amoy, is the most important stream, as it connects Amoy with Changchowfu and the rich agricultural section lying back of the first range of hills paralleling the coast. This stream has two forks known as the North and West Rivers. Even from Changchowfu to Amoy the river is navigable for only very light-draft native craft, and in some stretches farther inland small boats of 1-foot draft can not pass. To bring coal, for instance, from Lungyenchow, two transshipments are necessary on account of rapids, and boats of only from 1 to 6 tons are available along the entire route. Steam launches are able to proceed as far as Chiohbe en route to Changchow, but only at flood tide.

A stream having its sources beyond Anki and Yungchun flows close by the city of Chuanchowfu, but this, like the Kiulungkiang, is only available for shallow-draft boats.

The estuary on the north of Amoy extends within a few miles of Tungan, and still farther north to Anhai, the inland port of Chuanchowfu. Steam-launch service with these points is available.

There are numerous small streams and waterways throughout the district, but they are navigable in part only for very small boats, being broken by numerous rapids.

There are no fixed charges or tariffs for cargo or freight traffic; these are determined by the traffic and facilities available at the time of departure. Plans have been drawn and surveys made for a series of roads on the island of Amoy, the scheme providing for about 16 miles of road, the first section to be built directly across the island. Funds for this project are not yet available.

RAILWAYS.

There is but one short railway in the entire district. This is what is known as the Chang-Hsia Railway or the Amoy-Changchow branch of the proposed Fukien railway system. A scheme for a system of railways in Fukien was notified from the provincial capital in 1906. This scheme contemplated a line from Amoy to Changchow, thence via Chuanchow and Hinghwa to Foochow, with a branch also proceeding from Changchow south to join the Kwangtung railways at Chaochowfu.

Work on the Amoy-Changchow section, a distance of about 33 miles, was begun in 1907, and at the end of 1911 the line was completed as far as the left bank of the East River, near Kiangtungkiao, better known to foreigners as Pohlam bridge, about 17 miles distant from Sungsu, the Amoy terminus (on the mainland across from Amoy Island). A bridge across the river at Pohlam must be built before further advance can be made. The expense of this undertaking has so far barred the extension to Changchow.

This project was originally financed by private Chinese capital; when the line was completed as far as Pohlam bridge the shareholders were dissatisfied with the progress made for the $800,000 (local currency) originally subscribed, and it was found impossible to raise additional funds.

The road was taken over by the central Government on April 1, 1914, for management, pending the time when sufficient funds can be raised to complete and properly nationalize the line. The road is now being operated at a loss under the Ministry of Communications.

The railhead remains at Pohlam bridge, and trains are run daily along this 17 miles of line. The roadbed and equipment have not been kept up, and the line is in a decidedly poor condition.

Neither Sungsu (the terminus on the mainland opposite Amoy) nor the railhead at Pohlam is of any consequence as a shipping point, and the amount of freight carried is therefore practically nil.

There is no immediate prospect of anything further being done with the present line, or with the original proposed scheme of railways for the Province—largely because of lack of funds but partly from political considerations.

A proposal is being considered to build a narrow-gauge passenger railway from a point near Anhai, on the estuary north of Amoy, to Chuanchowfu, but nothing has been done on the project, it being decided not to proceed further with the scheme until after the close of the European war and the reestablishment of normal conditions.

A proposal has been made, however, to construct a temporary automobile road over this stretch and maintain a motor-bus service—the busses later (when the railroad is built) to be used on roads to act as feeders for the rail line.

POSTAL FACILITIES.

Besides the Chinese postal service, which maintains mail and parcel communication with all parts of China at the established tariff (with the exception that additional postage is required on mail matter to and from distant inland points and postal money-order facilities are restricted), the port of Amoy enjoys Japanese, British, French, and German postal service with points abroad and with some of the other treaty ports of China. Money-order facilities, however, especially with the United States, are restricted and need to be materially improved.

Mail matter from the United States intended for Amoy now passes through the United States Postal Agency at Shanghai to the Chinese postal service and reaches Amoy usually by direct steamer from Shanghai, but sometimes via Foochow or Swatow. The average time for mail matter from New York to Amoy is 30 days, and the same for return mails, but the unsatisfactory mail facilities on the Pacific that have resulted from the European war have frequently caused delay.

TELEGRAPHS.

The Chinese Telegraph Administration maintains land-line connection between Amoy and South China ports, Shanghai, and Peking, with branches to the larger cities in the Amoy district, including Changchowfu, Chuanchowfu, Chaoanhsien, Tingchowfu, Lungyen, and Liencheng. The tariff is that uniformly in force throughout China: Per word, Chinese, in Fukien Province, $0.06 Mex.[1]; in other parts of China, $0.12 Mex.; English, in Fukien Province, $0.09 Mex.; in other parts of China, $0.18 Mex.

The Great Northern Telegraph Co. (Danish) has cable connection between Amoy, Foochow, Shanghai, and Hongkong. The tariff fluctuates with silver exchange and is fixed and notified from time to time, usually quarterly. The ordinary rates per word are: Amoy to Shanghai and Hongkong, $0.18 Mex.; to Foochow, $0.09 Mex.; to places in North China (via Shanghai), $0.36 Mex.; to places in South China (via Hongkong), with a few exceptions, $0.36 Mex.; rates to America and Europe on charges corresponding to the above and to the rates from Shanghai and Hongkong. Rates to the United States, via the Pacific, are: New York and Boston, $2.40 Mex.; Chicago and St. Louis, $2.35 Mex.; San Francisco, $2.15 Mex.

The French Telegraph Administration maintained a cable from Amoy to Saigon. This line has been out of service for several years, though communication may be restored after the close of the European war.

The foreign telegraph companies have depended for supplies and equipment largely on their home countries, and, before the war, to some extent on Germany. Supplies are now drawn from home countries and from British sources.

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[1] See footnote on p. 84.

The Chinese line is supplied through the Chinese Telegraph Administration's supply department in Shanghai, under the Ministry of Communications at Peking. It is understood that considerable American material is being used by the Chinese lines since the outbreak of the European war.

TELEPHONES.

There is a telephone system in the international settlement on the island of Kulangsu, Amoy, under Japanese ownership and management. There are not more than 25 telephones in operation; the service is unsatisfactory and inefficient. In the city of Amoy there is a Chinese telephone company operating about 135 telephones. The equipment is from Japan. The service is charged for at the rate of $4 local currency per month.

NEWSPAPERS.

At present three Chinese newspapers are published at this port, with a combined circulation of only 3,100. A shipping paper in English, with no regular news service (the Amoy Gazette), is published daily for 36 subscribers. A number of Hongkong and Shanghai native papers circulate throughout the district. While no statistics are available, it has been estimated that probably only 7 to 10 per cent of the inhabitants are able to read or write.

PUBLIC WORKS.

As in all parts of China, there is in the Amoy consular district a very extensive system of irrigation of fields for the production of rice, but this is entirely under the control of the farming people and is a crude and simple but effective system. No foreign machinery is used; and, considering the circumstances of the people, it is to be doubted whether foreign pumping machinery and windmills could be introduced successfully.

There is no conservancy or reclamation project in hand or contemplated at the present time.

As in most other Chinese cities, there is a complete absence of water supply and sewerage systems in Chinese cities throughout this district.

There is electric lighting in Amoy City, Kulangsu (the foreign residence section of the port on an island in Amoy Harbor), Chiohbe, Changchow, and Chuanchow.

The Amoy plant was established in 1912 by a Chinese company, the Amoy Electric Light & Power Co., with a capital stock of $300,000 local currency. The equipment includes two 100-kilowatt and one 300-kilowatt turbine generators of American manufacture and four water-tube boilers. Power is transmitted in 3-phase, 60-cycle, 2,300-volt alternating current and stepped down to 110 volts for house service by means of transformers. The total number of lights in use is 16,000 in 16-candlepower equivalents. The charge for meter-rate consumers is 30 cents local currency and the charge for flat-rate consumers $1 local currency for 10 candlepower per month. This plant furnishes no power current at present, but is prepared to do so if industrial concerns should be established at Amoy.

Kulangsu has an electric-light installation operated by the Shanghai Electric & Asbestos Co. (Ltd.), a British company, which obtained an exclusive franchise in 1913 for a period of 15 years. The plant installed is claimed to be of 75-kilowatt capacity, the machines being of British manufacture, but the company has overloaded its real capacity and as a result the municipality has given notice that unless improved service is immediately forthcoming the monopoly will be set aside. The current is supplied in 220 volts direct current. The charge is 22 cents per unit local currency.

Changchow, inland 33 miles from Amoy, has a plant under construction. The Changma Electric Light & Power Co. (Ltd.), a Chinese concern, has organized with a capital of $150,000 local currency to erect a plant consisting of one 50-kilowatt generator and one 30-kilowatt generator to be driven by gas engines and give a lamp voltage of 220 direct current. Gas producers of English manufacture are to be used to supply gas to the gas engines.

Chiohbe, about 17 miles inland from Amoy, has a plant consisting of two 37-kilowatt generators, 500 volts, 74 amperes, driven at 960 rotations per minute, to supply 3,700 16-candlepower lights. Light is supplied at 220 volts. The charge is 80 cents local currency per lamp. It is proposed to install a meter system at 30 cents local currency a unit. The plant is driven by one 120-horsepower engine run on gas produced from Chinese coal costing about $20 local currency per ton in Amoy. The machinery is of British manufacture.

At Chuanchow, on the coast north of Amoy, a plant equipped with Japanese machinery is being run. A 2-cylinder, 150-horsepower producer gas engine drives a 75-kilowatt direct-current generator supplying a lamp voltage of 110. The coal used is obtained from Formosa in three different grades, costing $10, $8, and $6.75 United States currency per short ton. A 10-candlepower lamp costs 80 cents local currency a month. The meter rate varies from 26 to 32 cents local currency per unit. The company at present has more than 3,000 lamps in use. The capacity of the plant is placed at 3,500 lamps. It is proposed to purchase additional Japanese machinery, to consist of a 200-horsepower producer gas engine and a 150-kilowatt generator. The original plant cost about $15,000 United States currency.

Other cities in this consular district are discussing electric-light plants. The subject is particularly important at the present time on account of the high price of kerosene oil due to war conditions. There is an opportunity for the sale of American equipment, provided liberal financial arrangements can be offered.

Both Amoy City and the International Settlement of Kulangsu are in need of adequate water-supply systems. Surface wells alone now furnish the water supply, and in the dry seasons there is often a shortage of water. Attempts have been made to improve conditions, but so far without result.

TREATY PORTS AND FOREIGN CONCESSIONS.

Amoy is the only treaty port or port opened to foreign trade in the district, having been opened under the treaty with Great Britain of 1842. The Chinese population is estimated at about 114,000.

There is a British concession, a small Japanese concession, and a very small and more or less nominal American concession on Amoy Island along the harbor front.

In 1903 China granted as an international settlement the island of Kulangsu, opposite Amoy. This forms the consular and residential section of the port. It is administered under land regulations agreed upon between the treaty powers and the Chinese Government. Subject to some supervisory control by the consular body, the administration is vested in the Kulangsu municipal council, consisting of six foreign members, elected annually by the ratepayers, and one Chinese appointed by the Chinese authorities. The council is responsible for the general administration, taxation, police, sanitation, public works, etc. Funds are provided by a system of tax assessments on property and rentals and by license fees. Debentures to the extent of $20,000 local currency are outstanding.

The foreign population of this island is placed at 292 and the Chinese at 11,000. The population includes a number of British Chinese, Japanese (Formosan) Chinese, and Phillipine Chinese.

The report of the Kulangsu International Settlement for 1917 shows a revenue from taxes and licenses amounting to $41,300 Mex. and an expenditure of about the same amount. At the annual meeting of the taxpayers a resolution was adopted instructing the council to provide fire-fighting apparatus for the settlement. In view of the lack of a water system a chemical apparatus will probably be adopted.

Consulates are maintained by the United States, Great Britain, and Japan; merchant consulates by Belgium and the Netherlands; a merchant vice consulate by Norway; an honorary vice consulate by Denmark; and a consular agency by France.

FINANCE AND BANKING.

Banking in Amoy presents many unusual features. The many currencies in circulation make it difficult to give definite statements on exchange, etc., either locally, with the other China ports, or with the various foreign countries.

The Hongkong silver dollar, Japanese (Formosan) silver yen, Straits dollar, and Indo-China piaster are all seen among the "hard coin"; and the Chinese and Japanese banks issue paper currency.

One of the features of the trade of this port, says a recent Customs Trade Report, is that regarding the local currency:

> The unit of this currency is the so-called Spanish dollar, which, though actually in use in the sixties, had totally disappeared from the market by the end of the seventies. Since then, however, it has been retained as a book unit by the local agency of the Hongkong & Shanghai Bank and made to rule practically all commercial and banking transactions of the port. The rate of this unit with regard to the silver currency actually handled here—styled "chopped yen" and consisting variously of Japanese yen (coined for Formosa), Hongkong dollars, Mexican dollars, and Indo-China piasters, all considered (strange to say) to be mutually equivalent in value—is fixed from day to day by the aforesaid bank. It varies generally from about 2 per cent premium to par, but may even go below par in times when local silver coins are scarce, as in 1911, when it actually touched 3½ per cent discount. [Note: In 1916 it touched 9 per cent discount.] The sole criterion for this fluctuation is the bank's want or superfluity of silver dollars, which is practically synonymous with the port's demand or supply of coined currency. Some other banks established in more recent years—the Bank of Taiwan and the Chinese official Bank of Communications—have local silver currency, yen or dollars, as their unit, but this has not affected the paramount

position of the Spanish dollar as the basis of trade and foreign exchange transactions at Amoy. From a currency point of view the position is a most remarkable one, as the only legal tender for daily purposes consists practically of checks on one bank or silver coins at rates fluctuating daily at the will of that same bank. Though in theory the Spanish dollar is represented by 72 candereens Canton weight of current dollars or silver of 0.900 fineness, in practice sycee is not obtainable, and the bank reserves the right to refuse the acceptance of dollars by weight, taking them by count only, with the interposition of its daily rate to arrive at Spanish dollars. Needless to say, this rate also varies for buying and selling. The system of handling dollars by count only has become the rule, since the bank's policy of accepting only clean or slightly chopped dollars has had the effect of driving the old mutilated cup-and-saucer-like coins to other ports or into the melting pot.

Notwithstanding all the above peculiarities, the Amoy currency system presents distinct advantages for the trade as compared with the neighboring coast ports. By adhering to an extinct currency and continuing that as a book or bank unit, the bank is able to keep its unit mostly at par with the Hongkong dollar and quote for its sterling exchange almost invariably the identical figures ruling for the day at Hongkong. The Amoy merchant thus obtains in his foreign dealings the benefit of a sterling exchange rate very closely following the price of par silver and is freed from the additional uncertainties introduced by varying supply and demand of the local currency, which may amount to a considerable percentage in abnormal times or through artificial "riggings" of the money market. The Amoy currency system may thus be quoted as an object lesson to show how under a heterogeneous and irregular coinage system a fictitious bank unit may be resorted to almost unconsciously, with great steadying effect, and how easy it is even for a single bank to maintain such a fictitious unit under conditions which are far removed from carrying any force in the nature of legal compulsion. In this direction would seem ultimately to lie a practical road toward currency reform and unification for China.

In addition to the Hongkong & Shanghai Banking Corporation's branch, the Bank of Taiwan (Japanese), and the Bank of China (Chinese), there are private Chinese banks of varying importance and stability. Some of these banks are branches of similar establishments in the Philippine Islands, Singapore, and other ports in the East where large numbers of Amoy emigrants are found, and serve as one of the principal mediums for the transfer to Amoy of funds from the Chinese wage earners who have emigrated abroad. These remittances average in the neighborhood of $12,000,000 United States currency annually.

One of the interesting features of these native exchange banks is what is known as their "letter departments." These banks are sometimes known as letter hongs; but most of them also transact native exchange and banking business.

Chinese letter brokers establish themselves among the Chinese emigrants abroad and receive from them letters and amounts of money to be paid to the families in the Amoy district. The letters are then transmitted to the letter hongs with an endorsement showing the amount to be paid to the addressee, and the sum total of the remittance comes forward from the letter broker in an exchange transaction, or the letter broker, as the agent of the exchange bank, is granted a certain credit. The letters when received by the native exchange banks or letter hongs are distributed with the amount of currency called for. The charge for this service is from 2 to 3 per cent.

The interest rates charged by local banks on loans and granted on deposits are substantially as follows: Foreign banks, interest on deposits 2 to 2½ per cent on current accounts, and 3½ to 6 per cent on fixed deposits of from 6 to 12 months. Chinese banks, from 3 to 6 per cent on deposits and fixed deposits, and 7½ to 12 per cent on overdrafts and loans. Some Chinese banks have even higher rates.

MANUFACTURING AND OTHER INDUSTRIES.

Agriculture is the principal industry of the Amoy district; yet the exports of agricultural products are almost a negligible quantity and food products form a heavy item of import.

As previously mentioned, an important consideration in a census of the Amoy consular district is the fact that large numbers of its able-bodied male population are abroad. For many years past thousands of able-bodied men from this district have annually emigrated, principally to the Straits Settlements, the Dutch East Indies, and the Philippine Islands. A number of these have amassed fortunes, and though for many years they continue to live abroad they eventually return to spend their last days in Fukien Province; the less fortunate emigrants endeavor to do the same, and even those who can not be classed as successful are usually able to make remittances for the support of their families at home in this district.

The number of these emigrants leaving annually is about 60,000. There are also numerous returning emigrants, many of them coming home on periodical visits; but it remains a fact that the real workers of the district, who might develop the resources of south Fukien if capital were available and political considerations did not deter, are seeking their fortunes abroad, and a very considerable number of those remaining at home are living in comparative idleness and supporting themselves on the remittances from members of the clan in foreign lands. This serious drain on the laboring population is everywhere evidenced by the deserted fields and abandoned homesteads. Not infrequently villages are encountered in which the majority of the once substantial habitations and well-built temples are now ruins or rapidly falling into decay, and the people of such hamlets are principally women and children and elderly men, the young and able-bodied having gone abroad to earn a living for themselves and their dependents with the expectation of more promising conditions—a hope that, unfortunately, is not always realized.

The result is a scarcity of labor, comparatively high rates of wages, and the neglect of the industrial possibilities of the district.

The two canning factories at Amoy represent the total of modern manufacturing establishments in this consular district. The factory of the Amoy Tinning Co. (Ltd.), a Chinese corporation, is probably one of the most interesting in South China. It is the larger of the two and is well equipped with modern canning factory machinery, principally American, which cost about $20,000. The buildings and land cost about $40,000. The plant is equipped for an output of 40,000 cans a day; the present output is about 10,000 cans a day. The capital is about $100,000, and the business done in 1916 amounted to almost $100,000.

The China Canning Co. (Ltd.), also a Chinese company, has an establishment in Amoy of which the land and buildings cost about $25,000 and the machinery and equipment $18,000. The plant is equipped for 10,000 cans a day; its present output is 5,000 cans a day. The capital invested amounts to about $76,000 and the present value is estimated at $85,000. The business in 1916 amounted to about $80,000.

The output of these two factories includes canned meats, canned fish, salted vegetables and shellfish, canned vegetables, preserved fruits, fruits in sirup, and soy and soy sauce.

Practically the entire output is intended for Chinese consumption, at home and abroad, and considerable quantities are exported annually to the Amoy Chinese in the Straits, India, Java, and the Philippine Islands. providing them with many of the delicacies of their home land.

Sugar factories, with some modern equipment on a small scale, are to be found at Amoy and elsewhere in the district (Tunganhsien, Lungkihsien, and Punghwohsien). It was thought at one time that a profitable sugar industry could be established in this district, but, as previously mentioned, the high hopes entertained have not been realized and the sugar industry has in many cases been abandoned.

A glass factory has been attempted at Amoy several times but has failed. Lamp chimneys and bottles were manufactured.

In this district of few industries the manufacture of paper stands out very prominently. "Joss" paper is the principal class manufactured, but writing, printing, and wrapping papers are also made. The industry is confined to small factories in the valleys and gorges of the mountainous parts of the hinterland. The most important region is probably Tingchow, but Punan (on the North River), Lungyenchow, and Kinan also are points of manufacture. The Chinese method of manufacture is very crude, but effective. The paper exported annually is valued at as much as $500,000 United States currency.

Bricks and tiles of Chinese type, for roofs and rough floors, are manufactured in the region of Chiohbe and Changchow for local consumption and for some small exportation to Formosa and the East Indies. The annual outward movement is very small.

Iron pans and ironware, principally kettles used in the manufacture of sugar and camphor in Formosa and catechu in the East Indies, once formed a considerable industry in this district, but the trade has declined as a result of outside competition. The annual outward movement from the port is very small.

Native tobacco is prepared and exported to the Chinese abroad, and some attempt has been made in a small way to establish a native cigarette industry.

The manufacture of bobbin lace by Chinese women is a local industry and is confined to the international settlement on the island of Kulangsu. This industry was started by a foreign lady who imported linen thread and patterns of Irish lace and taught the local women. The industry is very small, being confined to two guilds, but Amoy hand-made lace is not unknown, and with capital and organization it seems reasonable to presume that a profitable industry could be built up in the same way that the lace-making industry is spreading in the neighborhood of Chefoo.

Cloth made from ramie fiber, known commercially as grass cloth, is manufactured to a small extent in the extreme northern part of this Province. A considerable quantity of this grass cloth and similar cloth manufactured in Kiangsi Province is understood to find its way overland to Amoy and is prominent in the exports of the port to the Philippine Islands, but the actual quantity manufactured in the Amoy district is insignificant.

Coarse chinaware, paper umbrellas, and macaroni and vermicelli are the remaining items under the heading of manufactures, but they are of virtually no importance.

There is no prospect of any immediate considerable advance in manufacturing or in the mining industry. Political considerations partly contribute to this want of activity, as do lack of capital and the utter lack of transportation facilities to encourage the opening up of the smaller industries.

American capital would be welcomed in this district, the attitude of the people being friendly to the United States.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

Any review of the trade of Amoy would be lacking if it did not make some reference to the former importance of the port as a tea center. This tea trade, which placed Amoy in the foremost ranks of China ports at one time, has already been discussed in the review of the agricultural products of the district (see p. 335).

Out of a total of 49 ports opened to trade, Amoy in 1918 stood twenty-first in the importation of foreign goods (handling less than 1½ per cent of the total foreign imports into China) and thirtieth as regards exports (furnishing about one-third of 1 per cent of the goods shipped abroad).

The following table shows the gross and net value of the Maritime Customs trade of the port in the years 1904, 1913, and 1918:

Imports and exports.	1904	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$9,169,378	$8,094,285	$8,787,541
From Chinese ports	73,131	262,974	489,844
Total foreign imports	9,242,509	8,357,259	9,277,385
Reexports of foreign goods:			
To foreign countries and Hongkong	2,637,998	377,848	134,742
To Chinese ports	42,300	122,824	253,688
Total foreign reexports	2,680,298	500,672	388,430
Net total foreign imports	6,562,211	7,856,587	8,888,955
Imports of Chinese products	3,141,180	4,683,987	5,027,232
Reexports of Chinese products:			
To foreign countries	108,554	164,845	131,970
To Chinese ports	10,084	9,593	146,548
Total Chinese reexports	118,638	174,438	278,518
Net total Chinese imports	3,022,542	4,509,549	4,748,714
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	1,332,335	1,713,602	2,166,311
To Chinese ports	438,126	801,375	810,076
Total exports of local origin	1,770,461	2,514,977	2,976,387
Gross value of the trade of the port	14,154,150	15,556,223	17,281,004
Net value of the trade of the port	11,355,214	14,881,113	16,614,056

EXPORT TRADE.

The export statistics of Amoy for 1918 show that much the greater part of the export trade of the port is with those countries and foreign colonies to which the vast army of Amoy Chinese has scattered. The classes of articles exported are largely of the type for Chinese consumption, and it may be said as a general statement that the exports of the district go abroad principally to the Amoy Chinese overseas.

The following table shows, by quantity and value, the declared exports from Amoy to the United States and the Philippine Islands during the calendar years 1917 and 1918:

Articles.	1917		1918	
	Quantity.	Value	Quantity.	Value.
TO UNITED STATES.				
Narcissus bulbs...thousands..	609	$26,985		
Personal and household effects				$231
Total		26,985		231
TO PHILIPPINE ISLANDS.				
Alum...pounds..	52,360	1,520	10,199	385
Bamboo shoots (cut and dried)		1,187		320
Beans...pounds..	172,108	9,811	34,398	2,790
Bean curd...do....	11,248	961	3,367	596
Berries, arbutus, dried...do....	87,948	4,134	29,971	1,914
Books and stationery		9,884		8,605
Brassware		157		
Brooms		203		43
Chinaware		6,044		3,227
Cloth, "T"				4,855
Combs		4,037		1,912
Fish nets, hemp...pounds..	8,560	3,355	8,721	3,607
Fruits, n. e. s...do....	252,528	4,826	106,649	2,376
Garlic...do....	1,442	94		
Grasscloth		5,806		
Grindstones...tons..	1	22	1	41
Iron, manufactures of, n.e. s.		6,687		1,811
Joss sticks		935		1,008
Mortars, stone		225		208
Medicine...pounds..	9,891	2,449	9,565	900
Nuts: Groundnuts, unshelled...do....	42,966	2,034	14,644	1,393
Oils...gallons..	2,267	1,309	85	59
Oysters		6,541		1,300
Paper...pounds..	141,527	8,194	42,126	2,770
Paper:				
Cigarette		942		271
Joss		3,070		1,749
Pickled vegetables, salted and preserved		24,820		10,874
Playing cards...packs..			213	106
Rice, cleaned and prepared...pounds..	7,991	789	333	57
Shell fish and fishery products		1,527		792
Sugar candy...pounds..	3,984	329	2,676	313
Tea...do....	18,639	5,156	4,476	1,407
Tobacco, cut and prepared...do....	1,932	931	2,765	1,603
Turnip seeds...do....	13,731	621	1,998	274
Twine, hemp...do....	41,730	3,602	8,157	1,914
Vegetables, in natural state		1,189		803
Vermicelli...pounds..	367,766	15,443	126,830	6,023
Wines and spirits		439		1,247
Woodenware		990		823
Sundries		17,536		1,670
Total		157,799		70,046

The declared exports during 1913 were:

Articles.	Value, 1913.	Articles.	Value, 1913.	Articles.	Value, 1913.
TO UNITED STATES.		TO PHILIPPINE ISLANDS—continued.		TO PHILIPPINE ISLANDS—continued.	
Lace	$70	Chinaware	$1,434	Tea	$3,567
Narcissus bulbs	7,658	Combs, wooden	1,179	Twine, hemp	1,923
Personal and household effects	326	Fish nets, hemp	5,296	Vegetables, in natural state	709
Charges	10,780	Fruits, n. e. s	519	Vermicelli	1,982
Total	18,834	Grass cloth	14,624	Charges	4,090
TO PHILIPPINE ISLANDS.		Paper	4,599	All other articles	8,188
Beans	1,404	Paper, joss	558	Total	54,558
Books and stationery	1,561	Pickled vegetables (salted) and preserves	2,191		
		Rice, cleaned and prepared	734		

Because of the relative unimportance of Amoy's present export trade and the destination of the goods, it is not considered necessary to give statistics of shipments to countries other than the United States and its possessions.

Most of the exports being to Chinese overseas, it is found at Amoy that a considerable part of the export trade is in the hands of Chinese merchants. There are, however, several foreign firms that are prepared to do export business.

IMPORT TRADE.

It will have been noted from the table showing the gross and net values of imports and exports at Amoy that this port now carries an import trade in Chinese products amounting to something more than half as much as its consumption of foreign goods. In 1918 the net total imports of native goods amounted to $4,748,714, and of foreign goods to $8,888,955.

The following table shows the principal native goods imported in 1904, 1913, and 1915:

Articles.	1904		1913		1915[a]	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Bean cake ... tons	39,322	$786,364	79,293	$1,819,798	87,530	$1,590,541
Beans and peas ... do	29,272	625,521	32,489	791,818	51,845	1,122,415
Coal ... do	....	....	7,997	37,311	603	34,983
Cotton, raw ... do	313	67,248	233	41,067	205	40,623
Cotton, yarn ... do	....	....	1,226	301,596	1,394	299,398
Fish, dried and salted ... do	313	20,496	227	17,221	256	17,427
Flour ... do	684	24,868	4,791	166,452	19,609	574,208
Medicines	....	35,431	....	47,408	....	46,421
Oil, bean ... tons	311	22,334	475	39,748	1	60
Prawns, husked and dried ... do	1,572	161,347	691	62,603	29	2,912
Rice ... do	10,000	217,805	3,121	107,528	673	17,911
Samshu	....	28,546	....	119,727	2,241	103,554
Seed, sesame ... tons	892	39,737	370	17,099	595	29,462
Tea ... do	113	31,790	207	59,527	167	65,505
Tobacco leaf ... do	1,088	65,605	1,417	105,389	1,211	61,685
Vermicelli ... do	604	43,622	358	11,352	786	62,604
Wheat ... do	6,328	112,758	289	6,958	1,026	25,440
All other articles	....	857,708	....	931,385	....	881,370
Total	....	3,141,180	....	4,683,987	....	4,976,519

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[a] EDITOR'S NOTE.—There is no available statement showing the value of the native goods imported in more recent years.

The principal trade indications to be drawn from this table, without reference to variations that are attributable to transient causes (such as the war, lack of tonnage, local crop conditions, exchange affecting remittances home from emigrants abroad, etc.), are (1) the large and increasing quantity of bean cake required for fertilizer purposes (and bean cake is the cheapest fertilizer of the Far East, against which foreign fertilizers can not compete); (2) the appearance of Chinese cotton yarn in the statistics of 1913 and 1915 and the absence of such statistics in 1904, showing the gradual and important extension of the Chinese cotton-yarn business since the establishment of cotton mills in China; (3) the heavy increase in the importations of Chinese flour, which is gradually replacing the American flour for purposes of Chinese consumption in this part of China, following the advent of modern flour mills in North and Central China; and (4) the considerable quantities of foodstuffs that appear, showing that the Amoy district, despite the fact that agriculture is its principal industry, produces less than it consumes.

Turning now to the imports of foreign goods, one finds in 1904 a net total import of foreign goods amounting to $6,562,211; in 1913, $7,856,587; and in 1918, $8,888,955.

A feature of this import trade in foreign goods that deserves to be noted is the increase shown in the quantity of foreign goods imported from Chinese ports. This is an indication of the retrogression of Amoy from direct foreign trade to some dependence on other Chinese ports, principally Shanghai, for foreign goods.

The following table gives, for three years, the gross imports of foreign goods from foreign countries at the port of Amoy, by countries of origin:

Countries.	1916	1917	1918
British India	$544,730	$268,794	$49,168
Dutch Indies	557,259	270,540	440,174
French Indo-China	27,133	47	37,839
Hongkong	3,584,800	4,402.986	4,786,577
Japan (including Taiwan)	1,599,565	3,967,544	2,688,205
Philippine Islands	51,007	113.352	9,986
Singapore, Straits Settlements, etc	214,929	182,095	454,414
United States (including Hawaii)	503,555	324,594	313,733
All other countries	3,902	13,426	7,474
Total	7,088,880	8,643,378	8,787,541

Of the imports from foreign countries and Hongkong, the above statistics for 1918 show that 54 per cent came from the British colony of Hongkong, 30 per cent from Japan, 2½ per cent from the United States, and the remainder from the Dutch Indies, British India, Singapore, and the Philippines, the places overseas where the thousands of Amoy emigrants are laboring and seeking their fortunes. In fact, the shipments from those places represent largely a return in goods of part of the earnings of those emigrants, sent home for the support of their families.

The 54 per cent, or $4,786,577, credited in 1918 to Hongkong, largely represents foreign goods transshipped at that port, and includes a small amount of American goods sold at Amoy through Hongkong importers; the majority of the total, however, probably represents British goods, from Great Britain and the British colonies, and rice, sugar, and a few other Eastern food products for which Hongkong serves as a storehouse and distributing center.

Before the war Germany and Austria-Hungary claimed a fair percentage of the trade credited to Hongkong, but no statistics are available to show the extent of this participation in the Amoy trade.

The following table will serve to show the principal items that made up the net foreign imports for 1904, 1913, and 1918:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
COTTON GOODS.						
Shirtings:						
Gray, plain........pieces..	7,715	$9,657	63,823	$111,528	18,562	$100,443
White, plain........do....	53,579	137,913	35,316	108,151	19,003	122,147
Drills........do....	678	1,609	1,610	5,771	1,758	10,959
T cloths........do....	51,515	62,936	45,805	75,442	34,219	112,531
Lawns, white........do....	168	100	10,475	9,138	(a)	(a)
Dyed shirtings, figured and plain........pieces..	6,168	15,307	4,142	13,135	(a)	(a)
Turkey-red shirtings........do....	8,373	13,539	14,693	34,319	(a)	(a)
Cotton yarn........tons..	3,901	980,747	2,418	658,948	300	261,969
WOOLEN GOODS.						
Camlets, English........pieces..	4,408	33,166	2,654	28,141	(a)	(a)
Cloth, broad and medium........yards..	13,171	13,040	655	719	(a)	(a)
Lastings........pieces..	758	4,653	272	2,440	(a)	(a)
Long ells........do....	871	3,076	720	3,299	(a)	(a)
Spanish stripes........yards..	20,623	8,167	4,571	2,271	(a)	(a)
Woolen yarn and braid........tons..	20	20,310	8	10,544	(a)	(a)
METALS.						
Iron bars and nail rods........tons..	3	679	284	8,420	(a)	(a)
Iron, old........do....	293	5,395	409	7,569	(a)	(a)
Lead, in pigs........do....	94	5,322	85	5,975	52	13,287
Quicksilver........do....	15	15,211	11	12,844	5	20,639
Tin, in slabs........do....	319	137,261	319	160,282	91	183,791
SUNDRIES.						
Bêche de mer, black and white..tons..	460	92,513	296	72,855	181	96,046
Cereals: Rice........do....	22,131	1,040,708	26,665	942,251	15,427	970,587
Cigarettes........mille..	....	9,838	27,156	52,079	98,681	526,838
Coal........tons..	10,988	62,416	12,562	62,617	14,140	251,325
Dyes, colors, and paints:						
Bark, mangrove........do....	1,102	16,360	431	7,662	....	[b]27,743
Bark, sapan wood........do....	79	1,952	69	1,478		
Fish and fishery products (not including bêche de mer, isinglass, seaweed, and agar-agar)........tons..	2,341	172,484	6,175	614,376	3,637	871,866
Flour........do....	9,191	332,746	17,034	670,424	89	8,550
Ginseng........pounds..	20,171	106,873	22,599	92,361	12,325	60,122
Manures (including chemical manures)........tons..	....	....	1,802	115,741	87	4,752
Matches, wood, Japan........gross..	515,970	85,817	59,957	182,442	658,134	356,146
Mats, tea and straw........pieces..	772,927	51,287	25,927	4,762	(a)	(a)
Medicines........	....	59,763	....	84,599	....	142,980
Oil, kerosene......American gallons..	802,960	102,595	4,997,584	625,478	1,858,093	581,932
Rattans........tons..	69	4,093	47	2,985	(a)	(a)
Sandalwood........do....	51	4,124	58	6,065	25	7,373
Sugar:						
White........do....	525	28,030	9,785	637,742	4,612	559,954
Refined........do....	470	25,237	1,118	75,884	4,197	608,949
Tea, Formosan........do....	8	3,642	....	....	44	19,361
All other articles........	....	2,896,645	....	2,345,860	....	[c]2,968,665
Total........	....	6,562,211	....	7,856,587	....	8,888,955

[a] Figures for 1918 not available.

[b] Dyes and dyestuffs.

[c] For 1918 this figure for "All other articles" includes all imports from Chinese ports; the specific items in this column represent imports from foreign countries and Hongkong.

COTTON GOODS.

Of the total imports, cotton goods form about one-fifth. The American participation in this trade, however, is very small, and confined largely to drills and jeans.

A considerable item of the cotton-goods trade is found in gray shirtings, the importations of which increased from 7,715 pieces in 1904 to 63,823 in 1913, but decreased to 18,562 in 1918. This trade is principally in the hands of the British and Japanese.

White shirtings are principally supplied by English manufacturers; the net imports in 1918 amounted to 19,003 pieces, valued at $122,147.

In T cloths, the Japanese control the bulk of the trade. Chintzes and plain cotton prints come mostly from England, which also sells the greater part of the cotton Italians, venetians, crêpe, and lastings, plain black and figured, that are imported at Amoy.

For a discussion of the South China cotton-goods trade, and the possible opportunity for American participation, the reader may be referred to Special Agents Series No. 107, Cotton Goods in China, by Trade Commissioner Ralph M. Odell (1916).

METALS AND MINERALS.

Under the above heading, tin in slabs is the most important item, reaching in 1913 a total of 319 tons, valued at $160,282, and in 1917 209 tons, valued at $204,091. In 1918 the amount was 91 tons, valued at $183,791. The China imports of tin in slabs are credited principally to Singapore.

Tin plates are used principally by the two canning companies at Amoy, and come largely from the United States.

The United States also participates to some extent in the import trade in steel bars, nails and rivets, nail rod, etc. The total trade in these items, however, is comparatively small.

RICE.

The largest single item of foreign imports is found in rice and rice paddy. In 1904 this amounted to 22,131 tons ($1,040,708), in 1913 to 26,665 tons ($942,251), and in 1918 to 15,427 tons ($970,587). The statistics credit the bulk of China's rice imports to Hongkong, which, however, is only a distributing point for rice from Siam, Indo-China, and British India. Amoy also draws a small quantity of rice from other China ports; but most of the imports come from abroad. The dependence of this district on outside food supplies is clearly indicated in this item of import.

BÊCHE DE MER.

Bêche de mer is another item of considerable importance, the value in 1904 reaching $92,513, in 1913 $72,855, and in 1918 $96,046. Here again Hongkong stands as a distributing point for this product from the Dutch Indies and Singapore.

FISH AND FISHERY PRODUCTS.

The United States participates to only a small extent in the China import trade in fish and fishery products, and practically not at all in the Amoy trade. Hongkong is a principal center through which Amoy imports but Japan also supplies a considerable portion. In

1904 the imports at Amoy amounted to only $172,484, but in 1913 they reached $614,376 and in 1918 $871,866. Here again is demonstrated the dependence of the Amoy district on the outside world for its food supplies.

SUGAR.

Sugar is another rather important article of food supply that Amoy draws from abroad. Notwithstanding that Amoy exports more than $100,000 worth of sugar to North China, it imports from abroad a supply of the same product, which in 1918 amounted to $608,949 in refined sugar and $550,954 in white sugar. The Amoy exports to North China consist principally of brown sugar.

KEROSENE.

Kerosene oil forms the one principal item of import in which the United States largely participates. In 1904 the kerosene imports amounted to 802,960 gallons, in 1913 to 4,997,584 gallons, and in 1918 to 1,858,093 gallons (valued at $581,932). Of the total American imports of all kinds into the Amoy district in 1918, given as $313,733, almost the entire amount was represented by American kerosene.

MATCHES.

A considerable business is done in the district in Japanese matches. In 1904 the imports reached $85,817; in 1913, $182,442; and in 1918, $356,146.

FLOUR.

Flour is an item which for some years was of considerable importance to the United States, but since domestic flour has appeared on the market in large quantities American flour is gradually being superseded.. Of course the price of American flour, the war exchange freight rates, and shipping facilities account to a very considerable extent for the marked falling off, but it is interesting to review the imports of native flour: 1904, 684 tons, $24,868; 1913, 4,791 tons, $166,452; 1917, 8,888 tons, $467,581.

GINSENG.

Along with kerosene and flour, ginseng has always formed a part of the American trade with the port of Amoy; this trade, however, is not done directly but through the port of Hongkong. Ginseng imports in 1904 reached 20,171 pounds ($106,873); in 1913, 22,599 pounds ($92,361); and in 1918, 12,325 pounds ($69,122). But this, of course, does not represent American ginseng entirely, Chosen and Japan supplying a large part of the demand.

OTHER ARTICLES OF INTEREST TO AMERICAN EXPORTERS.

Without further detailed examination of the items of import, it is worth while to note some of the foreign imports that might be of interest to American exporters to this market, including cigarettes ($526,838 in 1918) distributed through the British-American Tobacco Co. (Ltd.); paints and oils, which come largely from Great Britain but in which American manufacturers could successfully compete in South China as they are doing in the northern ports; lamps and lampware, of American and Japanese origin; propelling machinery, largely from Great Britain; sewing machines; other machinery, in which the

United States should have its share; electrical materials and fittings, from Great Britain, Japan, and the United States; condensed milk, in which, through lack of proper representation, European brands prevail over the American.

GENERAL CONDITIONS IN IMPORT TRADE.

The import trade of Amoy is handled by the several foreign firms, by numerous Japanese importers who are active in the market, and, as in the case of other South China ports, by Chinese import houses that deal with firms at Hongkong or have business relations with Chinese abroad.

The comprador system is still used at this port by the European houses.

There are no American importers, with the exception of the Standard Oil Co. of New York, which handles petroleum products and lamps and lampware.

Two foreign banks, the Hongkong & Shanghai Banking Corporation (British) and the Bank of Taiwan (Japanese) finance the trade.

It deserves to be pointed out that outside of direct Japanese imports Amoy draws its foreign supplies largely from Hongkong, and to some extent from Shanghai, and also that the South China ports are usually included in territory alloted by foreign manufacturers to their agents in Hongkong or Shanghai.

Direct trade with the United States is largely out of the question. Trade with Manila is possible, but so far there has been little effort on the part of Manila merchants to participate in the trade of this port.

It is believed, however, that for the most part representatives of American manufacturers in Hongkong and Shanghai have failed to develop the South China coast-port trade; and while it may be true that richer fields are available elsewhere, it is entirely possible that, by occasional visits of foreign and Chinese representatives of such houses, the American trade with Amoy could be considerably increased.

Shanghai and Hongkong representatives of American firms should keep the South China coast-port consulates informed of the classes of American goods they handle and the American manufacturers they represent.

SHIPPING FACILITIES.

Amoy possesses one of the best deep-water harbors on the China coast. It is well lighted, and has accommodation for about 12 vessels of medium length in the inner harbor and abundant anchorage areas in the outer harbor for vessels of almost any length or draft.

Most of the loading and unloading is done by open cargo boats; care must therefore be taken in the packing of goods to be handled at this port so as to prevent damage from water or rough handling.

There is one dock at the port formerly operated by the New Amoy Dock Co. (Ltd.), but sold toward the close of the year 1917 to the Chinese Government for $410,000 local currency. The dock is 340 feet on blocks and 370 feet over all; width of entrance, 50 feet; depth on sill at high water, 18 feet.

Pilot service is maintained and is recommended upon entering the inner harbor. The charges are 1½ cents local currency per net register ton for merchant steamers, 2½ cents local currency per register ton for sailing vessels, and ¾ cent local currency per ton for war vessels (displacement); the minimum charge is $10 local currency.

Regular steamer connection is had by coasting vessels between Amoy and Foochow, Swatow, Hongkong, and Canton, and with Formosa. The Douglas Steam Navigation Co. and the Osaka Shosen Kaisha maintain ships on these runs under the British and Japanese flags, respectively.

With Shanghai a service is maintained, usually weekly, by the China Navigation Co. (British), with occasional calls from ships of the China Merchants Steam Navigation Co. (Chinese). These vessels call at Amoy en route to and from Hongkong or Swatow.

Normally, ships in the coolie trade ply on more or less regular schedules between Amoy and Manila, and Amoy, Singapore, and Java.

The Dutch Java-China-Japan line calls at Amoy en route to and from Kobe, with sailings monthly.

The China Merchants Steam Navigation Co. (Chinese) and the Indo-China Steam Navigation Co. (British) maintain irregular sailings between Amoy and other China coast ports.

There is no direct steamship connection with any port of the United States except by such vessels as ply between Amoy and Manila, occasional vessels to other Philippine ports, and the calls at Manila of the Japanese line to Java.

Irregular service has at times been maintained with Annam, Siam, and Rangoon.

The European war has resulted in high freight rates, even in the case of the coasting steamers, and has also withdrawn considerable tonnage, restricting the shipping facilities of the port.

In 1917, 689 steam vessels entered the port, with a tonnage of 822,957, as compared with 717 steamers, with a tonnage of 921,147 tons, in 1916. The principal nationalities represented were British, with 282 vessels of 365,551 tons, compared with 365 vessels of 479,318 tons in 1916; Japanese, 281 vessels of 281,081 tons in 1917 and 223 of 246,217 tons in 1916; Chinese, 74 vessels of 65,831 tons in 1917 and 89 of 91,636 tons in 1916; Dutch, 37 vessels of 95,147 tons in 1917 and 32 of 86,620 tons in 1916; and American, 7 of 10,110 tons in 1917 and 3 of 6,219 tons in 1916. In 1918 the shortage in shipping reached its height; the statistics show a falling off of 112 entries, totaling 193,000 tons, compared to 1917.

FACILITIES FOR TRAVEL.

The best season of the year for visiting Amoy and the Amoy district is from October to January. This is the dry season, when it is cool. It is followed by the rainy season and then by the extremely hot and humid summer.

There is one foreign hotel at the port, the King George, with accommodations for 8 to 15 guests. The rates are from $5 to $10 Mex. per day.

Amoy can be reached only by coasting steamer from Shanghai, Hongkong, or Formosa. No large mail boats call at the port, except that the Dutch liners on the Japan-Java-China run call at Amoy on their way north and usually on their way south from some North China or Japan port.

Travel in the interior is principally by small boat or sedan chair. The only railway in the district is that extending 17 miles toward Changchow from a point on the mainland opposite Amoy.

Steam-launch service is maintained with Chuanchow, Tungan, Anhai, Quemoy, and Chiohbe.

Amoy holds some interest for Americans on account of the visit of the American battleship fleet to this port in 1908, when the officers and sailors were elaborately entertained by the Chinese Government. Amoy is, moreover, one of the most picturesque and interesting of the South China ports and is worth a short visit by traveling Americans seeking more than a superficial view of China gained by visits to the large trade centers. Visits of tourists to the port are not recommended, however, except during the period from October to January, and care should be taken to ascertain that the port is free from quarantine at the time of intended visits.

TRADE ORGANIZATIONS.

A foreign chamber of commerce exists at the port, and in Amoy, Changchow, and Chuanchow there are Chinese chambers of commerce of some size and influence, in addition to the number of guilds of varying importance. The guilds or trade associations of Amoy include one engaged in trade with Hongkong and the East Indies, one comprising merchants engaged in North China trade, one for the silk-goods trade and others for the Formosan trade, paper trade, drug trade, etc.

AMERICAN INTERESTS.

The American interests in this district are largely missionary, but the Standard Oil Co. of New York maintains a branch at the port, with a large tank installation, the Singer Sewing Machine Co. maintains a Chinese agency, and the Texas Co. and one or two other American companies are represented by local houses.

There are a few Phillippine-Chinese firms at the port, engaging in local business and in private banking with the Philippine and other ports.

The missionary interests are extensive, and include hospitals, schools, and churches not only at Amoy and on the island of Kulangsu but in the interior at Changchow, Tungan, Siokhe, Shonghong, and other points.

The consular register shows 67 Americans (men, women, and children) residing in the district, and 82 Philippine-Chinese and 7 Hawaiian-Chinese, all under the protection of the United States.

GENERAL TRADE SUGGESTIONS.

Amoy offers little or nothing for export; its foreign imports it draws largely through Hongkong and Shanghai.

Direct trade with the district seems, therefore, largely out of the question, although there is an opportunity for some direct trade between Manila and Amoy.

It is the custom, in alloting territory to representatives or agents in China, to include the South China ports in the territory of the Hongkong (or sometimes the Shanghai) agent. But the South China ports apparently have not offered great inducement to these agents and they are more or less neglected in the trade campaigns in China, the foreign import business of the port being controlled largely by the local Chinese firms, the few foreign import houses there (usually connected with houses at other ports), and the small Japanese importers.

A more studied effort on the part of representatives of American manufacturers at Hongkong or Shanghai should result in increased American trade with the district, especially in such lines as iron and steel products, hardware, paints, varnishes, tinned goods, provisions, medicines, etc. But this trade can not be expected to reach very large figures.

It seems to the writer that if the Shanghai and Hongkong representatives of American manufacturers would be careful to inform the South China consulates of the classes of American goods they handle and the American manufacturers they represent, some extension of trade might be obtained through consular efforts, but these representatives should also from time to time visit the South China ports, or send competent foreign or Chinese salesmen to inquire into the trade, take trial orders, and establish business connections.

ANTUNG CONSULAR DISTRICT.

By Consul John K. Davis.

LOCATION AND AREA.

The Antung consular district consists of the eastern section of Fengtien Province, Manchuria. The eastern boundary is formed by the Yalu River, which is also the international boundary between Manchuria and Chosen (Korea); the northern boundary is the division line between Fengtien and Kirin Provinces; the western boundary is a purely arbitrary one; and the southern boundary is the Korea Bay. Expressed in terms of corresponding location in America, this district would extend from Philadelphia on the south to Boston on the north, the eastern boundary would be the Atlantic Ocean instead of the Yalu River, and the western boundary line would run through Worcester, Hartford, and Trenton.

The area of the Antung district is about 18,000 square miles, or almost exactly twice that of the State of Vermont.

POPULATION.

The official Chinese estimate of the population in 1916 is 1,652,400, or 91.8 to the square mile. While no statistics are available it is probable that less than 100,000 of the population is urban.

PHYSICAL FEATURES.

The most conspicuous physical feature is the Yalu River, which can be navigated by ocean steamers as far up as the city of Antung, a distance of 30 miles from its mouth, and is navigable for native junks of 10 tons burden for more than 350 miles above Antung. The southern part of the district is hilly, with a large percentage of arable land, but the northern half is crossed by numerous low mountains and the arable land is practically confined to the narrow valleys and the lower slopes of the mountains.

CLIMATE.

In climate this district is perhaps the best suited in all China for American and European residents, for while in other districts moderate temperatures are usually accompanied by lack of sufficient rainfall and adequate rainfall is too often combined with excessive heat, in Antung the average annual rainfall is 42.27 inches and the mean annual temperature is just under 45° F. The averages of temperature for January and July closely approximate those of northern Michigan. The extremes in Antung, however, are much more moderate, for the average lowest temperature for January is −6.66° and the average highest for July 89.66°.

The annual precipitation of rain and melted snow is 42.27 inches, which is very nearly that of Portland, Me.

The most disagreeable features of the climate are excessive wind and the concentration of 21.15 inches of rainfall in the months of July and August, which causes the Yalu River to flood almost every summer. During the late winter and early spring months there is an almost constant north wind coming from the Gobi Desert, which greatly accentuates the cold and renders outdoor work unpleasant and difficult.

The following table clearly indicates the temperature and rainfall at different seasons:

Month.	Rainfall and melted snow.	Mean temperature.	Average highest.	Average lowest.
	Inches.	°*F.*	°*F.*	°*F.*
January	0.35	16.66	40.00	−6.66
February	.09	22.80	47.00	6.00
March	1.65	33.88	54.00	16.00
April	1.33	46.03	71.66	28.33
May	2.66	56.81	82.33	37.66
June	5.35	55.98	89.33	53.33
July	11.48	66.53	89.66	61.66
August	9.67	67.75	89.66	61.66
September	5.50	62.73	87.00	46.00
October	2.73	49.33	78.66	28.00
November	.94	33.22	60.00	9.66
December	.52	17.55	39.33	−6.33
Annual	42.27	44.35	....	....

POLITICAL SUBDIVISIONS.

This district corresponds to the intendency of the three Eastern Marches and consists of that portion of the Province of Shengking south and east of a line starting from the sea west of Chuanghoting, thence north about 30 miles, thence northeast, crossing the Antung-Mukden Railway a little north of Fenghwangcheng and continuing in the same direction to the boundary of Fengtien and Kirin, thence following this boundary southeast to the Korean frontier.

EDUCATION.

The proportion of literates in this district is very low; while no figures are available, it is estimated at less than 10 per cent of the total population.

Educational progress, because of the lack of facilities for interior communication and the sparse population, has been less rapid than in the more densely populated parts of China.

By reason of the fact that Antung is the only large city and the greater number of the people live in rural communities or villages, there are no higher educational institutions in this district. The highest grade of school is the middle school, which corresponds to the grammar school in America. There is one of these middle schools in each hsien or county.

The only modern hospital managed by Chinese is a small Red Cross hospital in Antung under the management of two Chinese physicians who received their medical education in Japan.

The Japanese settlement at Antung possesses a Japanese graded school (costing $80,556), a higher primary school, and a kindergarten.

The only missionary schools are a few primary schools operated in Antung and at several interior points by the Danish Lutheran Mission.

Since the only textbooks in English that are used are primers printed in Shanghai and Japan, for teaching the English language to Chinese and Japanese children, and since practically no modern school equipment is in use, this district does not offer a market for American textbooks or school supplies.

There are two non-Chinese hospitals in this district—the South Manchuria Railway Hospital and the Danish Lutheran Mission Hospital, both in Antung. Both of these hospitals are run on modern lines and use modern equipment and supplies, chiefly of Japanese and German manufacture.

There is but little prospect of any increase in the near future in the use of modern school or hospital supplies, as the present schools and hospitals satisfy existing demands in the district.

AGRICULTURE.

With the exception of lumbering in the northern section and the bean and silk mills in Antung city, agriculture (including sericulture) forms the chief occupation of the population. The principal crops produced are soya beans, sorghum, corn, millet, and rice, as well as a wide variety of vegetables, such as cabbage, turnips, spinach, eggplant, etc. Soya beans and the cereals are exported, but the vegetables are consumed in the districts in which they are produced. The farming methods are the same as have been used in northern China for centuries. The implements are crude but inexpensive and practical, and consist of plows, hoes, rakes, spades, and picks. The chief farm draft animals are the horse, mule, ox, and donkey. Natural fertilizers consisting of animal manure and human excrement are used extensively.

With the exception of a Japanese dairy at Antung, no cows are kept for milk-producing purposes, and it is estimated that not more than 2,500 beeves are slaughtered annually. Cattle, therefore, are kept principally as beasts of burden. Large numbers of hogs and goats are raised and consumed in the district, but are not exported. Chickens, geese, and ducks are raised throughout the southern part of the district for local consumption, but there are no poultry farms. One breed of chickens found in this district is remarkable for the size both of the fowl and of the eggs.

Soya beans and their products, bean oil and bean cake, are exported, principally to Japan, Chosen (Korea), and South China ports. Millet and other cereals are exported to Chosen.

Exports of silk and cocoons amount to one-third of the total value of exports from Antung. The cocoons raised in this district are fed on the leaves of a variety of dwarf oak and produce silk of a natural brown color, whereas the silkworms of Central China, which are fed on mulberry leaves, produce white silk. The locally produced silk is the material from which the world-famous "pongee" fabrics are woven.

MINERALS AND MINING.

There are at present no large mines in this district, and as those individuals who have undertaken prospecting have, for obvious reasons, refrained from publishing the results of their investigation, accurate and comprehensive information concerning mineral deposits is not obtainable. However, to the north as far as Linkiang there are numerous outcroppings of bituminous coal, which are worked by the local Chinese residents in the most primitive manner. Gold ore of unknown grade has been found here and there throughout the district, copper deposits are said to exist near Linkiang and Tunghwa, while there are silver deposits near Fenghwangcheng.

As the Chinese administrative officials in this district are under the governor general at Mukden, reference should be made to the Mukden chapter (p. 217) for information as to the administration of mining affiairs and the official attitude toward foreign investments.

COMMUNICATIONS: GENERAL INTRODUCTION.

The city of Antung is very well situated as regards means of communication with the outside world. The South Manchuria Railway connects it with Mukden, where connections are made for Tientsin and Peking and for Northern Manchuria and Europe, and the Chosen Railway connects it with points in Chosen (Korea) and Japan.

From the end of March until the end of November steamers run from Antung to Shanghai, Tientsin, Tsingtau, Dairen, Chefoo, and Korean and Japanese ports. The connections with points in the interior, with the exception of those served by the South Manchuria Railway, and those on or near the Yalu River, are not good and are by means of crude native carts and sledges.

The Yalu River and its tributaries furnish one of the principal means of communication with the outlying portions of this district—from March to December by junks and from November to April by carts and sledges running over its frozen surface. Because of its shallowness at certain points there are no steam craft in commercial use, except for the short 30-mile section between Antung city and the sea. The junks are of varying type, and only the smaller ones can navigate for a long distance upstream. Seagoing junks, which ply principally to Shantung, Korean, and Manchurian ports, rarely attempt to go much farther upstream than the city of Antung.

On the tributaries of the Yalu River, of which the Hun is the only stream of any importance, the navigation (except on the Hun River below Shatsientze) is all downstream. That is, the numerous rapids and strong currents make it impracticable to take junks upstream, and produce is taken downstream in crude boats that are knocked to pieces and sold for lumber on reaching their destination.

The unit for transportation in the interior is the picul, which in this district is a weight of about 120 pounds, and packages must be of such size and shape that they can be conveniently carried on a cart bed. There is no fixed rate per mile per picul, but rates to equidistant points often vary greatly according to the difficulties of the road. There is, moreover, no fixed tariff between any two points, each shipment being subject to a special arrangement. However, the following average rate per picul (120 pounds) from Antung to certain interior points, which obtained in the spring of 1915, will convey a general idea of the difficulties of transportation (figures are in United States currency): To Linkiang, $0.75; to Tunghua, $0.42; to Yushulintze, $0.30.

Because of the inadequate trails that do service for roads, practically all produce is moved during the winter to points along waterways and is then brought down to Antung city in the spring; for transportation is at its best in the winter, when, with ice several feet thick, every river and stream furnishes a beautifully smooth road.

The only taxation—with the exception of a local tax at Shatsientze of about 1½ per cent, to which foreign goods are subjected when moving to the interior—is the "inland transit tax." This amounts to one-half of the import duty, and is paid at Antung before the goods go forward.

RAILWAYS.

The only railway in operation in this district is a 60-mile section of the South Manchuria Railway. The Antung-Mukden line, of which this is a part, was completed in 1910. It was constructed by the company operating it, and is Japanese owned. So far as is known, there are no plans for any extensions in this district. The locomotives and many of the better passenger coaches for this road have been purchased from America, while the poorer passenger coaches and freight cars are now manufactured by the company itself. The head offices of this railway are in Dairen. (For details concerning the South Manchuria Railway Co. see Dairen chapter, p. 519.) There are no new roads under construction or planned.

There are no tramways in this district, probably because of the fact that the only cities in it are Antung and Fenghwangcheng, which possess populations of less than 50,000 and 20,000, respectively.

ROADS.

The roads in this district are very poor; in fact, most of them are nothing but trails or stream beds. The only vehicle in use is the North China cart, a heavy, cumbersome, but exceedingly strong two-wheeled vehicle that is drawn by from two to six draft animals. Horses, mules, oxen, and donkeys are all in use, and occasionally a cart is seen that has four different kinds of animals hitched to it. Unfortunately, little if any attention is ever given to the upkeep or improvement of roads, with the result that so long as they are barely passable they receive no repairs.

POSTAL FACILITIES.

The Chinese Post Office furnishes an adequate service for nearly all towns of any importance in this district. Parcels sent to points not served by the railway must not be over 11 pounds in weight and 1 cubic foot in volume. The majority of the mail is carried by couriers and carts.

The only foreign post office in this district is the Japanese Post Office at Antung, which furnishes both parcel-post and money-order service with the United States. The parcel-post rate is 24 sen ($0.12 United States currency) per pound. The mail facilities with the United States through Korea and Japan are excellent. The average time required for receipt of first-class mail matter from New York is about 28 or 29 days; when good connections are made with the fastest steamships the time required is reduced by 3 to 5 days.

TELEGRAPHS.

The Chinese Telegraph Administration furnishes telegraphic service with nearly all of the more important towns in this district and with other Manchurian and Chinese cities, and receives messages for practically the entire civilized world. The rate varies with the distance. Telegrams for Shanghai are $0.18 Mex.[1] per word, and for points in the eastern part of the United States $1.20 (United States currency) per word. In addition to the Chinese telegraph service there is the Imperial Japanese Telegraph Service, which furnishes service with points in Manchuria, Chosen, and Japan, and also accepts telegrams for all important points in other countries. The rate for messages to points in Manchuria and Chosen (Korea) is 5 sen ($0.025 United States currency) per word.

There are no submarine cable terminals in this district, and messages for transmission to the United States, if sent by the Chinese Telegraph Administration, are sent over the Commercial Pacific Cable Co.'s cable at Shanghai, and if sent by the Japanese Imperial Government Telegraphs are forwarded from the cable stations in Japan.

The "Wheatstone" method of sending and receiving is in use.

The materials that have been used in the Chinese telegraph lines have come from England, Germany, and Japan, while most of those used in the Japanese lines came from Japan.

So far as is known, no extensions of either Chinese or Japanese telegraph lines in this district are contemplated.

TELEPHONES.

There are only two cities in this district having telephone services, Antung and Fenghwangcheng. From Antung there is long-distance telephone service to Takushan, 50 miles distant; to Fenghwangcheng, 40 miles; and to Santaolangtow, 6¼ miles. In Antung there are Chinese and Japanese companies, the former operating in the Chinese city and the latter in the Japanese Settlement. The materials and instruments used by the two Antung companies and by the Fenghwangcheng company have all been purchased from Japan, and all instruments are of the magneto type. The number of telephones in use is as follows: Antung Chinese company, 250; Antung Japanese company, 427; Fenghwangcheng company, 36; total number in district, 713.

NEWSPAPERS.

There are no Chinese newspapers printed in this district, and only one Japanese paper. The Chinese papers published in Mukden, Peking, Tientsin, and Shanghai are read to a limited extent. Because of the small number of copies of any one paper coming to Antung, the use of the press for advertising purposes in this district would prove expensive and productive of scant results.

PUBLIC WORKS AND SANITATION.

So far as can be ascertained, there are at present no irrigation or reclamation projects for this district, and the only conservancy plan, the deepening of the fairway in the Yalu River immediately below

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[1] See footnote on p. 84.

Antung city, has been indefinitely postponed because of lack of funds.

In the Chinese city of Antung the streets have been macadamized, but, in consequence of continued lack of attention and the wear and tear caused by the narrow-tired but heavy native carts, they are in very poor condition.

In the Japanese Settlement, where Chinese carts are prohibited and where the general traffic is much lighter, the streets are well kept up. In both the Chinese city and the Japanese Settlement the streets are lighted by electricity. In the Chinese city the water supply is derived from private wells and the Yalu River, but in the Japanese Settlement there is a modern water-supply system fed by deep artesian wells. In both cities the sewerage is inadequate. Night soil and garbage are carried off by coolies and used as a fertilizer on near-by truck gardens. In both cities the only fire protection is furnished by hand-power engines, and from a western standpoint this is utterly inadequate.

The electricity department of the South Manchuria Railway Co. operates a power plant, which is located in the Japanese Settlement at Antung and which has been hitherto the only light and power plant in this district. The engines and generators of one plant are of British manufacture, while those of the second plant were made in Germany. The output of the first plant is 1,000 kilowatt hours and of the No. 2 plant 2,600 kilowatt hours per day. The motive power of the No. 1 plant is steam and of the No. 2 plant suction gas.

The lighting rate is 25 sen ($0.125 United States currency) per kilowatt hour, subject to a 10 per cent discount for payment of bills at the company's office within the first five days of the succeeding month, and with a minimum monthly charge of 30 sen ($0.15 United States currency) per light. Power rates for use other than lighting are 6 sen ($0.03 United States currency) an hour per contracted horsepower up to 200 hours a month, and 4 sen ($0.02 United States currency) an hour per contracted horsepower over 200 hours a month.

During the first week in July, 1918, the railway electricity department began the construction, immediately to the west of the Japanese settlement at Antung, of a new electric light and power plant, the cost of which is estimated at the equivalent of $210,000 United States currency. The generators, each of 1,000 kilowatts capacity, were purchased from an electric company in Japan. It was expected that the plant would be in operation by December, 1918. While the new plant will remedy the existing insufficiency of current for lighting purposes, it is intended primarily to furnish motive power for several new manufacturing enterprises which are expected to grow up in its immediate vicinity. The first of these is the Anto Yoko silk mill. In addition to this a box factory and several other smaller enterprises are being considered.

There are no waterworks in the Chinese city of Antung or in any of the interior towns of this district. The Japanese Settlement at Antung is served by the waterworks department of the South Manchuria Railway Co. The rates per cubic meter are as follows: For "luxury" use (fountains, etc.), $0.10; for industrial use, $0.05; for use in private residences, $0.025; for use in business offices, $0.015.

TREATY PORTS AND FOREIGN CONCESSIONS.

There are in this district three ports opened by treaty to foreign trade—Antung (which was opened by the Sino-American treaty of 1903), Fenghwangcheng, and Tatungkow. Antung, which is the only one of the three possessing any importance, has an estimated population of 48,538, composed of 40,548 Chinese, 7,930 Japanese, and 60 westerners. It is located on the western bank of the Yalu River 30 miles from the Korea Bay.

The only foreign concession is the Japanese Settlement at Antung. Permission to establish this was granted by the supplementary agreement to the Manchurian Protocol of 1905, and it was actually opened in 1906. The government of the Chinese city of Antung is in no way different from that of all Chinese cities; that of the Japanese Settlement is divided between the Japanese consul and a municipal council composed of all those taxpayers whose annual household tax amounts to 24 yen ($12 United States currency) or whose annual business tax amounts to 48 yen ($24). There are no limitations to foreign residence in the Chinese city. In the Japanese Settlement property may be leased by foreigners, but its purchase, while theoretically possible, is so hedged about with restrictions as to amount to only a 20-year leasehold.

Fenghwangcheng is a town of more than 18,000 inhabitants located to the west of Antung on the South Manchuria Railway.

Tatungkow, at the mouth of the Yalu River, is a village whose commercial importance has ceased to exist. There is no foreign concession or settlement at either Fenghwangcheng or Tatungkow.

The American and Japanese consulates at Antung are the only consulates in this district.

At Antung the conditions for trade with Japan and Korea are ideal, because of its proximity to the excellent railway and water connections, the large Japanese population, and the presence of Japanese banks and post and telegraph offices. The only American firm directly represented in Antung is the Standard Oil Co. of New York. The Singer Sewing Machine Co. has a Japanese agency.

The general conditions for trade with the United States are not good, by reason of the fact that practically none of the Chinese merchants are able to correspond in the English language and all prefer to deal with the man on the ground who has actual samples displayed and who will attend to all of the annoying complexities of importation and deliver the goods cleared of customs at Antung. The same statement holds good as to the conditions for trade with all countries other than Japan, for that country alone possesses the machinery for trade and, not unnaturally, prefers to use this machinery for the advantage of its own manufacturers and exporters.

FINANCE AND BANKING.

The currency having the most general use throughout the district is the "small-coin dollar," a unit representing five Chinese silver 20-cent pieces, but not itself coined. Except at Antung and Fenghwangcheng the greater part of the trade is carried on by the primitive method of barter. The farmer is given credit in the small village store until his crop is harvested, when he turns his produce over to the manager and thereby settles his debt, being either given credit in the store's books for any balance in his favor or paid in paper notes issued by the store and used as currency in that neighborhood. The relation of the small country store to the large firm in Antung is analogous to that of the farmer and the country store, for the country firm is given credit in the Antung firm's books for the stock of imported goods needed, and all of the produce—beans, cereals, and silk cocoons—that it has received from the farmers it sends to Antung for the large firm to sell. After the application of the proceeds of the sale of produce to the small country store's indebtedness the balance is often forwarded upcountry in fractional silver coins. In Antung and vicinity the common unit of business transactions is the "tael," the value of an ounce of silver of a certain fixed fineness. Silver dollars are used to a limited extent, but fractional silver is the form of currency that actually changes hands even in tael transactions. Japanese yen notes are used by the Japanese in trading among themselves and to a small extent by Chinese in trading with Japanese firms. The values in terms of United States currency of these units of exchange, with the exception of the Japanese yen, fluctuate greatly, but, on an average, are normally as follows: Antung tael, $0.69 United States currency; small coin dollar, $0.39; Japanese yen, $0.4985. The rates of exchange between yen, taels, and small-coin dollars also fluctuate daily.

The principal obstacles to American business in the line of finance are (1) the lack of stability in exchange rates and (2) lack of credit facilities.

There are in Antung three Japanese banks—the Antung branch of the Bank of Chosen, the Antung Savings Bank, and the Antung Bank. None of these are able to negotiate foreign paper other than Japanese or to issue drafts on any foreign country save Japan. The average rates of interest paid and charged by these banks are as follows: Current deposit, 0.005 yen per day per 100 yen on deposit; fixed deposit, 4½ per cent per annum; overdraft, 0.02 to 0.027 yen per day per 100 yen; loans against real estate, 0.019 to 0.028 yen per day per 100 yen; loans against crops, 0.027 to 0.028 yen per day per 100 yen.

There are also several large Chinese banks in Antung. Of these only one, a branch of the Bank of China, is conducted along modern lines. The rates of interest charged and paid by this bank are as follows: Current deposit, 0.0025 tael per day per 100 taels on deposit; fixed deposit, 6 per cent per annum; guaranteed loans, 12 per cent per annum. Overdrafts are not permitted even by arrangement. Loans against real estate or crops are not made.

The two old-style Chinese banks do not receive either current or time deposits and do not discount commercial paper. Their business consists almost entirely of making transfers to cities in Manchuria and China. Short-time loans are made at 1 to 1.3 per cent per month, and loans against real estate or crops at $\frac{7}{10}$ to $\frac{8}{10}$ of 1 per cent per month.

MANUFACTURING AND OTHER INDUSTRIES.

The principal industries in this district are agriculture, sericulture and spinning, bean milling, and lumbering. The weaving of rough cotton cloth has also just commenced and is likely to increase steadily unless political causes prevent.

Since, with the exception of Antung and Fenghwangcheng, the largest towns in this district only possess populations of from 2,500 to 3,000, practically all industries except agriculture, sericulture, and lumbering are confined to the two cities mentioned.

At the beginning of 1919 there were in operation in Antung a total of 22 large and 35 small silk filatures owned and operated by Chinese and 2 large Japanese-operated filatures. The number of reels in one of the larger filatures ranges from 300 to 1,200 and in the smaller ones from 25 to 100. Exact statistics are not available, but estimates place the number of reel stands at 14,400, as compared with 4,500 during 1917. The total number of workmen employed in the filature industry during 1918 is estimated at 15,500.

The tendency of filature owners to move their establishments from Chefoo to Antung in order to operate at the source of supply continued throughout 1918. To this has now been added the further plan of moving the pongee-weaving industry from Chefoo to Antung, and, in order to insure success and eliminate wasteful competition, it is proposed that a single large weaving mill shall be established, the capital of which is to be contributed by the owners of the silk filatures. However, this plan has not taken on definite form as yet. As a small beginning in this direction, six hand-power weaving establishments, employing an average of 25 workmen each, were operated during 1918.

A Japanese company, reported to have a capitalization equal to $500,000 United States currency and known as the Anto Yoko Manchu Kemmo Boseki Koba, began the construction during 1918 of a large factory in which it is planned to spin silk waste and to manufacture various fabrics. The machines are to be of a special variety suited for the purpose and are to be operated by electricity. When this factory for the utilization of the so-called silk "waste" (the tangled innermost and outermost threads of the cocoons) is put into operation, and when the above-mentioned pongee-weaving mill materializes, Antung will be the center not only of cocoon production and "tussah" reeling but of the final processes of manufacture as well.

There are in Antung 14 bean mills owned and operated by Chinese, each employing from 15 to 30 workmen. In these mills the oil is pressed from the soya bean and the residue is then made into large, flat, round cakes, which are exported to Japan and South China ports for use as cattle food and as a fertilizer. The engines in these mills are principally of Japanese manufacture and are said to have a very low efficiency.

One bean mill similar to those just described is owned by Japanese in their settlement in Antung but is leased to Chinese, who operate it.

There is only one power mill in Antung that weaves cotton cloth. This mill produces daily about 80 bolts of 40-yard length rough cotton cloth, and 720 pairs of cotton socks. The power is steam, and inexpensive looms of Japanese manufacture are used. Besides this mill there are about 30 small weaving mills in which hand looms are used, and which also knit cheap cotton socks that retail for as little as 3½ cents United States currency per pair.

In the year 1918 there were in operation in Antung 2 large and 10 small sawmills, 1 box factory, and a match-stick factory.

The Okura Copper Smelter and a number of smaller industrial plants were completed and put into operation in 1918.

Realizing the opportunities for woodworking establishments in Antung, where a number of varieties of wood suitable for furniture and cabinet work are offered at a comparatively low price, the Japanese consul established a woodworking experimental school in the Japanese Settlement at Antung in 1915, hoping by demonstrating the possibilities to induce capitalists to start industrial woodworking establishments, but up to June, 1918, none had been established or planned.

Japanese interests are contemplating the establishment of a mill in Antung for the manufacture, on a large scale, of paper from Korean wood pulp. The proposed company is to be capitalized at $2,500,000.

It is probable that, unless political developments prevent, much of the cheap cotton cloth consumed in this district will be manufactured in the city of Antung. As has been already stated, one small mill is now in operation, and if this venture continues to be a success Chinese capitalists will certainly find such mills an attractive investment. At present practically all the cotton goods sold in this district are those of Japanese manufacture which, because of their cheapness, have in recent years displaced the American and British products. In a similar manner goods manufactured in Antung will, unless subjected to too high a tax, capture the market by virtue of their lower cost of production.

The dearth of shipping and the consequent high prices obtainable for any kind of bottoms has resulted in an attempt at Antung to build small sailing vessels equipped with auxiliary oil motor engines. Up to June, 1918, the ships built had not proved a success, but it is now planned to construct a suitable dockyard just below the Japanese Settlement at Antung, on the bank of the Yalu River, and there regularly to construct auxiliary powered sailing vessels of several hundred registered tons suitable for plying to Japan, Chosen, and North China. As Antung is the distribution center for Yalu River timber, it is probable that after the experimental stage is past this industry will attain considerable success, although, in the period following the war, the demand will again be for steel rather than wooden shipping.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Antung during the years 1908, 1913, and 1918:

Imports and exports.	1908	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$947.368	$4,545,371	$26,017,521
From Chinese ports	846,049	644,137	905,528
Total foreign imports	1,793,417	5,189,508	26,923.049
Reexports of foreign goods:			
To foreign countries and Hongkong	443,692	133.204	794,874
To Chinese ports	5,352	40,500	16,854
Total foreign reexports	449,044	173,704	811,728
Net total foreign imports	1,344,373	5,015,804	26,111,321

Imports and exports.	1908	1913	1918
Imports of Chinese products	$474,963	$857,147	$3.225,412
Reexports of Chinese products:			
To foreign countries and Hongkong	22,161	30,895	68,298
To Chinese ports	3,301	10,959	231
Total Chinese reexports	25,462	41,854	68,529
Net total Chinese imports	449,501	815,293	3,156,883
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	447,270	2,671,541	13,981,958
To Chinese ports	1,657,800	2,305,710	4.659,691
Total exports of local origin	2,105,070	4,977,251	18,641,649
Gross value of the trade of the port	4,373,450	11,023,906	48,790.109
Net value of the trade of the port	3,898,944	10,808,348	47,909,852

EXPORT TRADE.

As the Chinese Customs Service did not establish a customhouse at Antung until 1907, the first year for which complete returns are available is 1908. It is therefore only possible to examine the growth of the trade of this port since that year.

The following figures indicate the value of the net exports from Antung for the past 11 years: 1908, $1,521,898; 1909, $2,789,113; 1910, $1,721,454; 1911, $2,907,219; 1912, $4,099,202; 1913, $4,977,251; 1914, $3,849,821; 1915, $5,389,422; 1916, $7,131,634; 1917, $13,772,570; 1918, $18,641,649.

It will be seen from this statement that in 11 years the value of the net exports has increased by about 1,125 per cent, and that, with the exception of the years 1910 and 1914, this increase has been a constant one.

The following figures, representing percentages of the total value of Antung's export trade, will give a clear idea of the relative importance of the chief commodities exported:

Exports.	1914	1915	1916	1917	1918
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Beans and bean products	24	24	26	37	27
Silk and silk products	28	33	24	13	13
Timber	22	17	23	11	13
Coal	14	14	17	11	11
Cereals	6	9	1	$\frac{9}{10}$	(a)
All other exports	6	3	9	$27\frac{1}{10}$	(a)

a Figures not available.

The principal factor facilitating the export trade of the district is the connection with Chosen and Japan furnished by the Chosen Railway, which connects with the South Manchuria Railway over the American-built steel bridge that spans the Yalu River at Antung. Another important factor is the Yalu River itself, which during eight months in each year is navigable to within a few miles of Antung city by small ocean-going steamers and for over 350 miles above Antung by native junks of 10 tons burden. Thus the produce of this district can readily be shipped to the principal markets, Japan and Chosen, either by rail or by water, and to the rest of the world by sea. The presence in Antung of a large Japanese commercial population, with Japanese banks, post office, and telegraph office, also greatly facilitates exportation to Japan and its possessions.

The condition that handicaps exportation to countries other than Japan is the small number of European and the utter absence of American firms engaged in an export business. The large Japanese export companies are so busily engaged in handling the large and constant volume of exports to Japan and Chosen that they have but little time or inclination to undertake export trade to foreign countries.

The two commodities, silk and beans with their products, which in 1917 constituted 50 per cent of the total value of exports, are brought to Antung city in the manner described under the headings "Communications" and "Finance and banking." It is seen, therefore, that the foreign firms engaged in export trade make their purchases not from the producers direct but from large Chinese concerns located in Antung and in other towns served by the railway. Timber is brought down the river in rafts and likewise is not marketed until it reaches Antung.

SILK AND SILK PRODUCTS.

In the Antung district the silkworm is known to the Chinese as the "mountain silkworm" and has been variously classified as *Antherea pernyi*, *Bombyx pernyi*, and *Bombyx fertoni*. Its food is the leaf of a species of dwarf oak, *Quercus mongolicus*, which is indigenous to southeastern Manchuria and grows uncultivated and in great abundance on the sides of the otherwise unproductive and rocky hills that traverse this entire district. In order to increase the foliage these trees are also carefully planted and pruned.

Two crops of cocoons, one in the spring and another in the autumn, are produced annually. The spring crop, which is put on the market early in July, is the smaller of the two and is used principally to produce eggs for the autumn crop, which is usually marketed after the middle of October.

Cocoons are packed by the farmer in large woven willow baskets containing about 30,000. A basket freshly packed weighs approximately 400 pounds avoirdupois. The weight, however, is reduced to about 267 pounds by the following spring as a result of the shriveling up of the chrysolides during the dry winter season.

The South Manchuria Railway, carts, boats, and (in winter) sledges are used to transport the cocoons to Antung, where they are stored in large walled or fenced inclosures and in warehouses until sold. Cocoons and spun silk are sold through large firms in Antung which, through their familiarity with both the yearly production and the market demands, are enabled to act as brokers and collect a commission for their services from both the seller and the purchaser. The purchasers, aside from the local filature owners, are chiefly representatives of filatures in Chefoo, Shanghai, and Japan, who come to Antung as soon as the season opens to secure their stocks.

Besides the cocoons, silk is exported in the form of "tussah" or reeled silk, as "silk waste," and in the woven form known as "pongee."

Tussah is divided into two classes, "native" and "filature." The term "native" is applied to that reeled by hand or foot power, which, being usually produced on a very small scale and in many localities, lacks uniformity. Practically all of the tussah exported from Antung comes in this class. The outermost and innermost threads of a cocoon are known as "waste," and, since they are composed of an inextricable mass of fibers, must be chopped up, combed, carded, and spun like cotton.

Cocoons are shipped principally to Chefoo and Japan; tussah to Shanghai, Chefoo, and Japan; and waste to Shanghai. The cocoons and tussah exported to Chefoo are there manufactured into pongee fabrics, while much of the tussah and waste sent to Shanghai and Japan ultimately find their way to the United States and Europe.

The amounts of cocoons, "native" tussah, and waste exported from Antung during 1918 were as follows: Cocoons, 12,851,866 pounds, valued at $1,729,974; tussah, 296,533 pounds, valued at $433,166; waste, 527,200 pounds, valued at $259,441. Roughly estimated, the number of cocoons used to produce the tussah and waste exported was about 150 per cent of the number exported unmanufactured.

BEANS.

The value of the beans and bean products exported from Antung during the year 1918 constituted 27 per cent of the total value of exports and amounted to $4,941,982. The bean that constitutes the great bulk of this export is known commercially as the soya bean and is grown practically throughout this entire district.

The bean crop ripens earlier in the southern section of the district than in the northern but is practically all harvested in normal years by the end of September. However, because of the superior transport facilities enjoyed during the winter, when roads and rivers are firmly frozen, it is at this time that the bean harvest is assembled at the various interior towns which serve as collection centers and from which it is forwarded to Antung in the spring.

The soya bean is exported in three forms—as "raw beans" (natural condition), as bean oil, and as bean cake.

The proportion of the export of beans, cake, or oil that goes to any given destination varies from year to year according to several determining factors. However, the following statement, which can only be regarded as approximate and not as exact, gives a general idea (through average percentage) of the destinations of the soya bean products exported from Antung: Beans—Japan, 76 per cent; Shanghai, 6 per cent; Chosen (Korea,) 5 per cent; other Chinese ports and Dairen, 13 per cent. Bean cake—Japan, 72 per cent; Shanghai, 20 per cent; Chosen, 1.8 per cent; other Chinese ports and Dairen, 6.2 per cent. Bean oil—Japan, 31 per cent; Shanghai, 36 per cent; Chosen, 21 per cent; other Chinese ports and Dairen, 12 per cent. It will be seen that Japan and Chosen (Korea) receive eight-tenths of the beans, almost three-fourths of the bean cake, and slightly more than one-half of the bean oil exported.

Beans are exported packed in gunny bags which, when filled, weigh about 175 pounds; bean cake in the form of large, round, flat cakes weighing on an average 75 pounds; and bean oil in empty 5-gallon kerosene oil cans, two of which are packed in a wooden case.

Most of the beans exported are doubtless milled and transformed into cake and oil on reaching their destination. Bean oil is put to many uses, but one that is of common interest is as the base of practically all table sauces. Bean cake is principally used as a fertilizer for rice and in China as a cattle food.

The trade in beans is a highly speculative one, since the market is contingent on two factors, the bean crop and the price of rice in Japan. When it is anticipated that the price of rice in Japan will be high, brokers will buy "forward" beans from the large Chinese firms in Antung. This form of speculation is one that has great charm for Chinese merchants, and there are few firms in Antung that do not "take a flier" occasionally in beans.

TIMBER.

During the year 1918 the value of the exports of timber amounted to 13 per cent of the total value of exports from Antung.

The forests from which this timber is cut are situated along the upper reaches of the Yalu River and its tributaries at distances varying from 250 to 400 miles from Antung. As already stated, the logs are floated to the Antung market in the form of rafts. The principal kinds of timber felled are pine, fir, larch, walnut, cassia, oak, and elm. Of these pine constitutes the largest part, with fir coming second. The timber exported goes principally to Chefoo and other smaller ports of Shantung Province, to Tientsin, Shanghai, and Dairen, and is sent abroad only in negligible quantities.

Timber is sold to buyers from the above-mentioned ports who come to Antung when the Yalu River opens to navigation and remain there throughout the season. Terms are usually cash on delivery, and prices fluctuate greatly.

The Yalu Timber Co., a joint Chinese-Japanese concern, is the largest timber firm in the district and enjoys many special privileges. In addition, there are 12 large, and many more smaller, Chinese firms dealing in timber.

COAL.

The coal whose export constituted 11 per cent of the total value of exports from Antung in 1918 is mined near Mukden (see chapter on Mukden district, p. 217) and only passes through this district on its way to Chosen (Korea).

CEREALS.

Three cereals, millet, corn, and kaoliang (sorghum), constituted $\frac{9}{10}$ of 1 per cent of the value of the 1917 exports. Of these millet is the most important, amounting to about three-fifths of the total. All three cereals grow practically throughout the entire district, and the exports of all go principally to Chosen (Korea).

STATISTICS OF EXPORTS.

The figures in the following table represent the principal articles exported through the Maritime Customs at Antung in 1908, 1913, 1915, 1917, and 1918:

Articles.	1908	1913	1915	1917	1918	
	Quantity.	Quantity.	Quantity.	Quantity.	Quantity.	Value.
Bean cake..............pounds..	30,478,800	72,644,400	100,509,200	226,336,133	194,100,933	$2,952,421
Beans......................do....	3,051,600	15,233,200	45,132,400	77,361,066	71,219,600	1,617,323
Bones, refuse.............do....	121,333	238,800	231,600	9,881,200	10,478,800	(a)
Bricks and tiles..........pieces..	....	360,080	161,618	652,936	255,815	(a)
Cereals:						
Kaoliang (sorghum)........ .... pounds..	....	3,959,733	1,677,200	454,800	(b)	(b)
Maize.................do....	1,158,266	2,983,466	5,781,333	12,068,667	15,162,933	237,424
Millet.................do....	....	46,880,200	29,356,800	42,809,200	(b)	(b)
Coal.........................tons..	....	140,403	189,099	315,740	313,296	2,055,693
Copper ore.............pounds..	66,666	....	....	627,867	11,067	(a)
Iron and steel manufactures.... .... pounds..	....	608,000	269,733	246,133	542,666	40,413
Iron pans..................do....	....	....	77,866	184,000	148,800	(a)
Medicines.............value....	$1,428	$33,469	$20,502	$32,376	....	39,335
Mushrooms............pounds..	69,600	25,600	13,200	6,400	23,600	(a)
Oil, bean...................do....	4,000	384,133	1,044,400	6,230,000	4,329,066	372,238
Samshu.....................do....	....	1,413,066	561,466	269,867	240,133	20,047
Silk:						
Wild, raw, not filature..... .... pounds..	1,066	....	1,194,266	371,333	296,533	433,166
Cocoons, wild.........do....	12,856,800	16,024,400	22,487,600	6,240,267	12,851,866	1,729,974
Waste.................do....	432,800	612,166	974,533	252,000	527,200	259,441
Cocoons, refuse.......do....	33,066	96,933	132,933	400	28,400	(a)
Pongees...............do....	666	11,866	22,666	5,867	27,066	38,514
Silkworms, dried.........do....	3,466	303,466	454,533	860,933	2,087,467	(a)
Skins (furs), sheep......pieces..	27	14,330	14,224	27,548	3,724	(a)
Tea:						
Black.............pounds..	....	....	666	(a)	....	....
Green.................do....	....	....	133	(a)	....	....
Timber, beams:						
Hardwood.......pieces c....	2,486	12,755	19,478	28,809	53,318	(a)
Softwood...........do. c....	81,710	276,759	442,508	346,529	410,509	(a)
Timber:						
Planks, softwood ...sq. ft..	11,049	6,305,744	2,797,305	9,581,112	10,391,533	(a)
Poles, softwood.....pieces..	10,740	18,848	22,602	70,167	63,047	89,548
Tobacco, leaf and stalk......... ....pounds..	76,400	39,200	41,200	37,867	27,867	(a)
Vermicelli and macaroni.do....	....	....	42,400	46,533	55,200	(a)
Yeast....................value...	....	....	$14,416	$18,077	....	16,653

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[a] Not available.

[b] Millet and kaoliang combined, 72,645,333 pounds, valued at $1,964,369.

[c] "Lien" of 8 feet unit.

The following table shows the value in American dollars of the five principal articles exported to foreign countries and Chinese ports through the Antung Maritime Customs during the years 1908 to 1918, inclusive:

Years.	Coal.	Cereals.	Timber.	Silk and silk products.	Beans and bean products.
1908....................................	$348	$2,049	$175,210	$1,633,714	$283,758
1909....................................	3,405	272	376,850	1,997,680	320,510
1910....................................	1,387	665	275,725	1,130,677	250,815
1911....................................	12,106	4,072	603,450	1,445,983	727,105
1912....................................	234,290	29,991	657,036	1,937,575	1,039,785
1913....................................	522,721	708,380	747,816	1,765,488	994,785
1914....................................	97,610	263,293	840,305	1,071,838	558,858
1915....................................	115,729	414,633	830,628	1,785,992	1,338,018
1916....................................	1,207,279	....	1,629,491	1,726,024	1,837,073
1917....................................	1,534,493	104,805	1,530,124	1,781,199	5,176,950
1918....................................	2,055,693	150,347	2,459,979	2,461,095	4,941,982

While considerable portions of the bean oil and "tussah" (reeled wild silk) produced in the Antung district are eventually consumed in the United States, there are no direct shipments of these or any other goods.

IMPORT TRADE.

This district is sparsely settled and, with the exception of Antung and Fenghwangcheng, possesses no cities. In consequence of the ranges of mountains and hills that traverse it throughout, there are no large arable plains lending themselves to agricultural enterprises on a large scale. Its sparse population, therefore, is relatively a poor one, whose wants are for the primal necessities of life and not for luxuries or semiluxuries. Accordingly Antung owes its importance as a port for the importation of foreign merchandise not to the goods consumed in this district but to those used in Mukden and points beyond, which only pass through Antung as a port of entry.

Four circumstances have combined to raise the city of Antung to its present importance as a port for the importation of foreign merchandise into Manchuria: (1) The completion of the Chosen Railway, which, through Chosen, connects the Yalu River with Japan; (2) the opening of Antung as a port for foreign trade in 1907; (3) the completion of the standard-gauge railway from Antung to Mukden in 1911; and (4) the erection of the 3,100-foot steel bridge across the Yalu River in the same year, by means of which the Chosen and South Manchuria Railways now furnish a through service from Fusan to Changchun. When this system of railways was completed Antung at once became the natural gateway through which all rail-borne merchandise from Japan enters Manchuria. When the one-third reduction in duty on goods imported into Manchuria from or through Chosen went into effect in 1913 the rail route through Antung became cheaper for the Japanese exporter than the water route through Dairen or Newchwang. This advantage of the Antung route was further enhanced when, in 1914, the South Manchuria Railway granted a special discount, amounting to 30 per cent, on 11 specific through imports from Japan via Chosen when carried over its Antung-Mukden branch.

The comprador system is in use by the foreign import firms at Antung.

All the large import firms operating in Antung have their own warehouses in which imported goods are stored until forwarded to interior points.

Goods intended for this district should be packed so as to be able to stand exposure to weather and the roughest of handling. Parcels should not be too bulky or heavy, as otherwise they can not readily be transported into the interior. In general, parcels measuring not more than 3 by 4 feet and weighing 150 pounds or less are well suited to local conditions.

Up to and including the year 1912 flour constituted the most valuable item in the list of articles imported through Antung. Commencing in 1913, however, cotton goods jumped into the leading position and their value now constitutes more than one-half of the total value of imports. This change has been brought about by the diversion of the imports of Japanese cotton goods from the other Manchurian ports to Antung, as a result of the one-third reduction of import duty on goods imported into Manchuria from or through Chosen (Korea) and the reduction in railway freight over the Antung-Mukden branch of the South Manchuria Railway, which have just been described.

The following table shows the value of the five principal imports for the years 1908 to 1918, inclusive:

Years.	Cotton goods.	Flour.	Kerosene.	Sugar.	Metals.
1908	$146,821	$331,406	$47,923	$47,603	$20,778
1909	155,652	264,969	67,508	36,292	17,531
1910	229,769	536,656	34,936	78,194	75,911
1911	334,685	468,757	49,036	62,477	259,675
1912	381,727	697,573	73,699	136,621	84,316
1913	2,173,285	715,661	162,171	102,394	81,479
1914	6,045,038	492,759	134,852	65,097	173,501
1915	5,532,104	492,230	124,369	96,831	45,162
1916	8,276,439	413,933	168,780	147,896	169,251
1917	16,369,314	113,245	277,794	303,706	228,914
1918	(a)	(a)	90,389	215,737	(a)

a Figures not available.

The figures in the following table represent the principal articles imported through the Maritime Customs at Antung in 1908, 1913, 1915, and 1918:

Articles	1908	1913	1915		1918	
	Quantity.	Quantity.	Quantity.	Value.	Quantity.	Value.
FOREIGN COTTON GOODS.						
Shirtings, grey, plain:						
American.........pieces..	8,898	6,420	1,715	$2,984		
English...........do....	13,111	12,632	9,805	22,281	8,234	$56,875
Japanese..........do....		5,464	17,965	40,259	77,931	553,181
Sheetings, grey, plain:						
American..........do....	66,211	32,822	18,056	43,159	322	1,997
English...........do....		738	1,420	3,546	590	4,470
Japanese..........do....	7,980	1,275,316	718,071	1,281,788	480,934	2,690,207
Shirtings, white........do....	25,013	39,422	25,026	64,288	86,165	610,056
Drills:						
American..........do....	15,734	3,900	3,545	9,845		
English...........do....	4,410	90	175	(a)		
Japanese..........do....	2,765	67,781	274,371	614,161	139,816	776,274
Jeans:						
English...........do....	20,546	29,951	15,963	39,256	4,870	27,378
Japanese..........do....		16,481	181,378	336,643	292,994	1,508,547
T-cloths:						
English...........do....			650	7,558	301	(a)
Japanese..........do....			6,172		13,299	(a)
Cambrics, lawns, and muslins, white, dyed, and printed, pieces	1,394	2,515	2,818	1,914	8,248	19,500
Chintzes and plain cotton prints...........pieces..	2,531	1,307			54,726	(a)
Printed T-cloths........do....	28	20				
Turkey-red cottons and dyed T-cloths...........pieces..	3,859	5,330	6,203	10,031	22,056	73,958
Cotton italians, venetians, crape, and lastings, plain, fast black...........pieces..	1,452	4,523	9,653	33,436	1,110	8,992
Cotton italians, venetians, crape, and lastings, plain, colored...........pieces..	14,538	4,832	1,178	(a)	16,690	4 106,525
Cotton italians, venetians, crape, and lastings, figured, pieces	3,246	7,050	1,846	5,537	2,888	19,109
Cotton flannel..........pieces..	2,612	10,235	35,871	75,201	20,459	114,497
Dyed drills and silesias..do....			23,426	(a)	32,040	(a)
Fancy woven cottons...yards..	98,195	285,164	1,397,222	(a)	3,158,388	(a)
Japanese cotton cloth....do....	87,076	316,869	44,970,778	1,982,985	45,852,607	4,084,126
Velvets and velveteens...do....		33,426	16,105	3,008	41,879	21,417
Cotton blankets........pieces..	71,714	62,337	50,383	20,648	56,005	52,617
Handkerchiefs........dozens..			2,572	3,137	18,382	2,434
Handkerchiefs, Japanese.do....			8,208			
Towels..................do....	33,293	54,547	168,891	56,735	119,481	122,600
Cotton yarn:						
English..........pounds..	13,200	400	4,800	(a)	6,971,066	3,047,472
Indian.............do....	26,400	36,800	103,333	(a)		
Japanese...........do....	257,600	789,200	6,903,066	(a)		

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a Editor's Note.—The figures for these values are not available; they are not given either in the published returns of the Chinese Maritime Customs or in the reports from the Antung consulate.

Articles.	1908	1913	1915		1918	
	Quantity.	Quantity.	Quantity.	Value.	Quantity.	Value.
FOREIGN COTTON GOODS—con.						
Cotton thread:						
In balls..........pounds..	....	16,533	37,600	$14,338	26,666	$24,108
On spools..........gross..	....	6,490	8,959	13,329	30.455	107.544
Poplins, figured........pieces..	....	....	4,651	31,216	10,172	124,507
CHINESE COTTON GOODS.						
Sheetings..............pieces..	2,360	4,242	20,142	56.504	42,610	318,733
Drills...................do....	....	360	8,460	23,724	10,551	79,356
Nankeens.............pounds..	263.600	212,933	329,066	66.631	541,466	225,734
Cotton yarn.............do....	158,400	62,400	68,666	10,667	74,933	37,929
FOREIGN WOOLEN GOODS.						
Blankets and rugs....pounds..	35,875	2,708	1,518	(a)	2,597	2,993
Cloth, broad, medium, habit, and Russian..........yards..	....	9,069	1,493	(a)	700	(a)
Long ells...............pieces..	....	....	444	1,864	300	2,552
Woolen and worsted yarn, pounds......................	....	....	6,666	3,558	....	....
FOREIGN MISCELLANEOUS PIECE GOODS.						
Silk piece goods.......pounds..	....	....	223,466	4,749	2,130,400	161,005
Silk piece goods, mixtures, pounds......................	....	....	1,049,466	12,374	1,157,066	32,706
FOREIGN METALS.						
Copper ingots and slabs, pounds......................	....	121,600	....	....	207,067	(a)
Iron and mild steel, new:						
Bars..............pounds..	....	....	65,200	1,200	241,066	17,234
Nails and rivets......do....	245.290	279,466	215.066	6.376	260,600	171,463
Sheets and plates....do....	94,800	206,266	91,733	1,933	82,266	9,723
Wire................do....	....	....	32,400	(a)	42,333	(a)
Iron and mild steel, old...do....	437,333	1,631,466	1,856,533	16,238	424,933	21,276
Iron, galvanized:						
Sheets and plates....do....	303,466	285,733	78,266	2,886	131,466	17,291
Steel, bamboo, bars, etc., pounds......................	128,800	152,400	88.533	(a)	79,333	(a)
FOREIGN SUNDRIES.						
Bags, all kinds.......number..	....	486,834	3,241,737	143,306	4,801,571	510,517
Beans and peas.......pounds..	....	....	388,266	(a)	519,067	(a)
Bêche de mer............do....	....	50.800	101,466	14,959	165,600	44,461
Braid, cotton...........value..	....	....	....	18,776	....	481
Candles...............pounds..	55,733	165,333	111,333	6,904	186,533	23,664
Cement..................do....	439,466	3,344,000	1,166,933	(a)	1,550,000	(a)
Cereals:						
Maize................do....	....	841,200	747,200	(a)	81,467	(a)
Rice.................do....	258,533	7,896,266	23,867,733	460,068	16.177,066	698,414
Charcoal.................do....	1,072,800	108,933	231,733	(a)	388,800	(a)
Chinaware..............value..	....	....	....	6,910	....	97,740
Cigarettes..........thousands..	7,755	42,918	52,653	69,696	337,324	394,535
Dyes, colors, and paints:						
Aniline.............value..	....	$11,549	....	....	....	6,956
Indigo, artificial..pounds..	174,400	171,333	224,933	67,489	18,800	(a)
Fish:						
Dried and salt.......do....	....	1,016,000	1,081,733	(a)	2,571,200	(a)
Fresh...............do....	....	1.562,000	1,256,400	(a)	2,881,600	(a)
Flour....................do....	16,078,933	22,753,333	....	....	....	....
Fruits, fresh.............do....	....	1,801,600	1,033,733	14,431	5,292,000	146.764
Glass, window..........boxes..	....	....	922	(a)	3,142	(a)
Hair: Animal, pig and cow, pounds......................	....	650,133	210,333	(a)	310,800	(a)
Matches.................gross..	233,223	257,283	258,724	31,624	74,750	25,139
Medicines..............value..	....	....	....	86,954	....	164,344
Milk, condensed, in tins, dozens......................	....	....	3,296	(a)	4,678	(a)
Needles............thousands..	....	....	16,834	(a)	97,317	(a)
Oils:						
Engine..American gallons..	....	....	23,118	2,252	36,535	18,576
Kerosene—						
American........do....	577.120	673,680	558,310	70,584	164,600	58,380
Sumatra.........do....	277,815	471,315	661,580	73,852	72,570	30,164

a Editor's Note.—The figures for these values are not available; they are not given either in the published returns of the Chinese Maritime Customs or in the reports from the Antung consulate.

Articles.	1908	1913	1915		1918	
	Quantity.	Quantity.	Quantity.	Value.	Quantity.	Value.
FOREIGN SUNDRIES—contd.						
Paper and cardboard..pounds..	....	1,698,666	834,266	$81,566	3,011,466	$416,714
Pepper....................do....	80,000	80,000	76,133	(a)	120,933	(a)
Seaweed.................do....	....	1,200,133	574,533	(a)	1,035,733	(a)
Skins (furs), all kinds...pieces..	....	....	86,655	30,229	150,698	(a)
Soap:						
Bar...............pounds..	....	180,400	153,466	(a)	338,133	(a)
Toilet and fancy...dozens..	....	44,666	76,011	(a)	177,319	(a)
Soda.................pounds..	....	1,744,400	1,015,866	(a)	90,667	(a)
Soy.....................do....	....	366,666	351,800	8,901	789,166	33,774
Sugar:						
Brown..............do....	440,666	807,466	613,600	129,199	3,888,266	215,737
White and refined...do....	3,358,000	2,872,133	3,440,800			
Candy.. ....do....	166,800	211,333	16,266	(a)	353,333	(a)
Timber:						
Hardwood......cubic feet..	....	4,357	168	(a)	13,571	(a)
Beams, poles, and piles, softwood....square feet..	....	920,753	1,548,475	(a)	12,297,560	(a)
Planks, softwood....do....	....	109,095	21,215	(a)	735,997	(a)
Tobacco..............pounds..	....	....	287,166	(a)	1,142,133	101,514
Umbrellas............number..	40,846	55,155	23,063	(a)	38,199	(a)
Wines, beer, spirits, etc.:						
Sake..............pounds..	374,400	911,333	1,181,600	(a)	3,477,200	(a)
Beer and porter.....value..	$10,211	$13,140	....	5,584	....	64,280
Spirits of wine.....gallons..	....	....	2,697	(a)	....	....
CHINESE SUNDRIES.						
Cereals:						
Millet.............pounds..	....	....	159,866	(a)	....	....
Rice..................do....	....	....	538,266	20,383	4,508,666	151,793
Cigarettes...............do....	116,400	81,800	100,666	24,424	41,400	30,111
Coal......................tons..	....	636	1,506	(a)	1,997	(a)
Cotton, raw...........pounds..	538,266	829,200	902,266	80,063	1,160,400	348,108
Flour.....................do....	2,992,133	8,372,000	29,289,066	491,873	25,715,333	1,060,163
Fruits, fresh.............do....	....	946,400	625,066	(a)	5,292,000	(a)
Grass cloth..............do....	....	....	31,200	10,832	18,000	15,551
Groundnuts..............do....	....	....	89,200	(a)	....	....
Macaroni and vermicelli .do....	....	....	171,066	(a)	....	....
Medicines..............value..	....	$4,879	....	3,265	....	164,344
Paper.................pounds..	....	1,698,666	1,685,466	71,676	1,237,066	133,196
Paper, joss..............do....	....	109,600	120,533	15,492	106,533	31,427
Shoes and boots, silk and cotton....................pairs..	....	....	4,958	(a)	....	....
Silk:						
Piece goods.......pounds..	15,200	14,933	13,866	(a)	....	....
Pongees, Shantung..do....	4,133	266	1,066	(a)	....	....
Sugar, brown............do....	....	....	46,133	(a)	746,533	(a)
Tea:						
Black................do....	140,933	187,066	139,200	18,594	108,266	31,216
Green................do....	73,733	5,600	2,133	289	129,333	32,899
Tobacco, prepared.......do....	206,133	275,066	295,733	30,985	108,366	28,947

[a] EDITOR'S NOTE.—The figures for these values are not available; they are not given either in the published returns of the Chinese Maritime Customs or in the reports from the Antung consulate.

Because of the absence of statistics showing the country of origin of goods, it is only possible to give the following approximate estimate of the proportion of the total value of imports into Antung coming from the various countries: Japan (including Chosen), 97 per cent; Great Britain, 1⅓ per cent; United States, 1 per cent; Dutch Indies, ⅓ per cent; all other countries, ⅓ per cent.

An examination of the table of imports reveals the fact that while in 1908 American shirtings, sheetings, and drills practically held the leading position, by 1918 they had suffered not only a relative but even an absolute decrease. This has been occasioned by the advantages of direct representation, geographical proximity, reduced duty, and low transportation charges enjoyed by the Japanese cotton manufacturers. As is stated elsewhere in this chapter, at least two of these advantages may also be enjoyed by American manufacturers.

Prior to the outbreak of the European war the larger part of the imported foreign flour was of American origin, but its place has been taken by flour milled in Shanghai. Whether, after normal conditions have been restored, American flour can recapture its former position, is very doubtful, because of the increased capacities and proximity of the Shanghai, Tiehling, and Harbin mills.

Practically all of the kerosene oil is imported by two companies, the Standard Oil Co. of New York and the Asiatic Petroleum Co. (British), though a small quantity of low-grade Japanese kerosene oil was imported during a recent year. The former company has an American manager stationed in Antung who has charge of his company's sales throughout this district.

The bulk of the sugar imported into this district is manufactured in Hongkong by a British firm and is brought to Antung in the company's own steamers. A considerable proportion of the cigarettes imported are of American manufacture but are marketed by a British corporation, which keeps a European manager stationed in Antung city.

In addition to the lines just mentioned, in the supplying of which American merchants have a share, there should be a good but limited market for the following goods: Inexpensive but highly ornamented clocks and watches; axes; cheap perfumes; cheap but colored and highly scented soap; cheap caps and felt hats; scales; cabinet hardware; and saws.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

Since the port of Tatungkow no longer possesses any commercial importance, and since Fenghwangcheng is an inland town, Antung is the only treaty port in this district that can be said to possess any shipping facilities. The natural water route for trade with the United States is by way of Japan, with the port of Kobe as a point of transshipment.

The Osaka Shosen Kaisha (Osaka Steamship Co.) has two steamers on the Osaka-Kobe and Antung run, which furnish sailings approximately every 10 days during the season of navigation.

The war has directly and adversely affected shipping facilities with the United States by decreasing the available tonnage on the Pacific and greatly advancing freight charges.

The silting up of the fairway of the Yalu River at a point several miles below Antung, which is thought by some engineers to have been occasioned by the piers of the railway bridge, has resulted in preventing ocean-going steamers from coming up, as was done in former years, as far as the Antung water front. The present anchorage for such vessels is at Santaolangtow, a subanchorage 6½ miles below the city. As the use of this subanchorage necessitates the additional expense of lightering all cargo, efforts have been made in recent years to dredge out the channel, but with no success. Conservancy works that would cause the river to scour out its own channel have been projected, but owing to lack of funds nothing had been done up to June, 1918. However, as such a plan would appear to the lay observer as likely to be successful, it is to be hoped that the delay owing to lack of funds will prove only a temporary one.

In spite of the difficulties caused by the necessity of lightering, and the great reduction in bottoms caused by diversion of shipping as a result of the war, the number of steamers entering the port during the year 1918 was 275, with a total tonnage of 106,696. Of these 123 were Japanese, 134 Chinese, 17 British, and 1 Dutch. The majority of these were small coasting vessels of 150 to 300 tons, which ran to Chefoo, Dairen, Tsingtau, and Korean ports. However, there were also several larger vessels of 1,500 to 2,000 tons running to Shanghai, Tsingtau, and South China and Japan ports.

FACILITIES FOR TRAVEL.

There is no modern hotel in Antung. However, the Yapuken Hotel, a Japanese inn, is often used by American and European travelers. The rates, including meals and service, are 3 yen and up (equivalent to $1.50 United States currency). The hotel maintained by the Chosen Railway Co. at Hsin Wiju (Japanese pronunciation "Shingishu"), Chosen, just across the river from Antung, is modern and well equipped, and can be reached by a jinrikisha ride of only 25 minutes from the business center of Antung. The rates are from 6 yen a day up ($3 United States currency). In the interior towns of this district there are no modern accommodations, and travelers must carry their own food and bedding with them.

The best seasons for visiting this district are the months of June, September, October, and November. In the early spring months there is likely to be too much wind for comfort, the rainy season occurs during July and August, and the winter months are cold and excessively windy.

By means of the Chosen and South Manchuria Railways, over which a thoroughly modern express-train service is maintained, Antung can be reached with ease and comfort at all seasons of the year from Japan or from Mukden. In terms of time, Antung is 10 hours and 20 minutes from Seoul, and 6 hours and a half from Mukden.

Passage may also be secured on steamers running from Shanghai, Tsingtau, Dairen, and Tientsin, but as the steamers that can come up the Yalu River are quite small it is usually more comfortable to travel by train.

TRADE ORGANIZATIONS IN DISTRICT.

There are only two trade organizations in this district, the Chinese and the Japanese Chambers of Commerce at Antung. The Chinese Chamber has a membership of 52 firms and plays a very important rôle in the commercial life of the Chinese city. The Japanese Chamber has 20 members and is a very wide-awake body, which loses no opportunities to advance Japanese trade interests.

In the Japanese Settlement there is a Japanese commercial museum where exhibits of Japanese manufactured goods can be seen by possible Chinese purchasers and where exhibits illustrative of the agricultural and mineral products of this district can be conveniently shown to prospective Japanese settlers and investors. As the admission is free these exhibits are seen by many people.

AMERICAN INTERESTS.

Although Antung was first opened to foreign trade by the American treaty of 1903, American interests in this district are, unfortunately, not large. At present, besides the local manager of the Standard Oil Co. of New York, the only representatives of American trade are several Japanese firms that incidentally hold agencies for a few lines of American goods. American flour and some American cotton piece goods are imported by way of Shanghai and are handled by local Chinese firms. However, the war has temporarily stopped the importation of flour, and the cotton piece goods have almost been replaced by Japanese cheap cottons.

There are no American missionaries in this district.

GENERAL TRADE SUGGESTIONS.

There is but little probability, under existing conditions, of American manufacturers capturing or holding any appreciable share of the trade in this district except in lines in which Japanese manufacturers do not compete. The reasons are found in the great advantages of geographical proximity, special transportation rates, lower import duty, and direct local representation which the Japanese manufacturers enjoy and which their American rivals do not. The first and second of these obstacles to the growth of American trade can not be overcome. The third and the fourth, however, while great, would not seem to form insuperable obstacles.

Commencing in the summer of 1913 all rail-borne goods imported into Manchuria from or through Chosen have enjoyed a one-third reduction in customs duties, and since virtually all Japanese imports into this district come over the Chosen railways, while practically all American imports come by sea, the Japanese manufacturer has, since 1913, had this advantage over the American producer. In Antung, which is the distributing center of the district, there are more than 7,000 Japanese residents, numerous Japanese import firms, representatives of Japanese manufacturers, an active Japanese Chamber of Commerce, a Japanese commercial museum, several Japanese banks, Japanese forwarding companies, and the only railway that feeds the district is in Japanese hands. In a word, all of the machinery and facilities for trade are possessed by the Japanese. On the other hand, there is only one American representing American trade; and he did not come until late in 1915, and represents exclusively a large American oil company.

It will readily be seen that an American manufacturer who tries to reach a Chinese customer unacquainted with the English language by means of a catalogue in English, quoting prices f. o. b. New York, is not likely to succeed in competing with his Japanese rival who has a Chinese-speaking representative with samples on the ground and who quotes prices ex-warehouse Antung. Fortunately this is not the only way in which American goods can come to this market, for a limited amount of American flour and cotton piece goods are sold by American import firms in Shanghai to the Shanghai buyers of Antung Chinese firms. Even when sold in this manner American goods are under a tremendous disadvantage.

In considering how this difficulty of lack of representation may be overcome it is obvious that only a firm having extensive sales in

Manchuria could afford to maintain a local representative, and that firms whose sales would be small could only have proper representation by giving agencies or, preferably, by combining to maintain their own resident representative. Agencies placed in the hands of European or Japanese firms are too frequently either neglected, because of the natural preference given to goods originating in their own countries, or are accepted merely to prevent rival goods from getting on the market. The plan of combination for Manchurian representation is one that has been developed elsewhere in this volume (see p. 245). With proper representation in Mukden and with a branch in Antung, it would then be feasible to land American goods at Kobe and to import them through Chosen, thus getting the advantage of the one-third reduction in duty.

Until some plan for direct American representation is worked out the best method of getting American goods on this market is through the large American import firms in Shanghai and Tientsin.

CHANGSHA CONSULAR DISTRICT.

By Consul Nelson T. Johnson.

LOCATION AND AREA.

The consular district of Changsha comprises the single Province of Hunan. This Province lies between the twenty-fifth and thirtieth parallels of latitude and the one hundred and ninth and one hundred and fourteenth meridians of longitude. It lies south of Tung Ting Lake and the Yangtze River. A similar area would cover a district as large as the State of Kansas and would be situated in the same latitude as the Gulf of Mexico or Florida. Its capital, the city of Changsha, where the American consulate is located, is approximately in the same degree of latitude as the city of Tampa, Fla. The Province is bounded on the north by the Yangtze River and the Province of Hupeh, on the west by Szechwan and Kweichow, on the south by Kwangsi and Kwangtung, and on the east by Kiangsi.

The area of Hunan is given by Prof. Richthofen from Chinese sources as nearly 84,000 statute square miles. Lobscheid gives 70,000 and Richard 83,398.

POPULATION.

The population of the Province is given by Richard as 22,169,000, or 265 persons per square mile. This total would be approximately equivalent to the combined population of the States of New York, Massachusetts, Pennsylvania, Connecticut, and New Jersey. The population is mostly rural, the people being generally collected in small villages and towns throughout the Province. Few of Hunan's cities number more than 50,000 inhabitants. The city of Changsha, which is the largest of the cities of Hunan, had, according to the police statistics published at the end of 1915, a population of 229,537. It may be estimated that of the total population of the Province 80 per cent represents the population living in the country districts and 20 per cent the urban population.

PHYSICAL FEATURES.

The Province is hilly and mountainous in the west, center, and east. Its watersheds, from which its four largest rivers flow into the Tung Ting Lake, form natural boundaries with bordering Provinces. There are no plains of any size. The hills and mountains in the west and south are well wooded, the inhabitants of those regions deriving considerable income from the exportation of timber. The waterways or rivers that drain these mountains rise near the borders of the Province and flow generally in a northeasterly direction to empty into the Tung Ting Lake. The Siang River is the largest of these rivers. Rising in Kwangsi, it takes a northerly course through the Province and forms the chief highway for trade between the Yangtze Valley and the southern part of the Province. At one time it was the trade highway that connected the Yangtze Valley with Canton. Next in importance comes the Yuan River, which rises in Kweichow Province on the west and, passing by the important cities of Shenchow and Changteh, likewise flows into the Tung Ting Lake. The remaining two rivers are the Tzu River, which flows through the central part of the Province, rising in the south, and the Li River, which drains the northern part of the Province, entering also the Tung Ting Lake. The Province generally slopes in a northeasterly direction toward the Tung Ting Lake. At one time this lake must have been a considerable body of water. It has silted up, however, until it is now dry for the most part during the winter months. The rivers that flow into it then find winding courses through its bed to enter finally the Yangtze River below the city of Yochow. During the summer months, however, when the Yangtze River is at flood and when the rainy season prevails in Hunan, the waters of Hunan's river systems meeting the rising flood of the Yangtze fill up the lake until it becomes a very large body of water. Richard gives the dimensions of this lake in the summer time as 75 miles long by 60 broad.

CLIMATE.

Hunan has a subtropical, moist climate. The summers are warm and damp, while the winters are exceedingly chilly because of the excessive dampness of the air, though the temperature rarely falls below freezing point. The temperature varies from 23° to 95° F. There is a distinct rainy season, which coincides generally with the summer months of the year. The prevailing winds are northerly. The average annual rainfall is 63.36 inches. The heaviest rainfall occurs in the month of June, while the lightest rainfall is in January. The customs records at Changsha show the mean average monthly rainfall over a period of six years as follows: January, 1.77 inches; February, 3.55 inches; March, 6.52 inches; April, 6.84 inches; May, 7.60 inches; June, 12.05 inches; July, 5.13 inches; August, 6.01 inches; September, 2.80 inches; October, 3.93 inches; November, 5.14 inches; December, 2.05 inches. While the Province is located in the same latitude as the State of Florida, snow falls frequently as far south as Changsha in the winter when the north winds blow.

POLITICAL SUBDIVISIONS.

The Province is administered by a high official appointed by the central Government and known as the civil governor. He has general jurisdiction over the Province, being responsible to the central Government for supervision over the judiciary and finances of the Province as well as supervision over the work of the various taoyin and district magistrates. The finances of the Province are under the immediate direction of a department of finance, which is a branch of the Ministry of Finance of the central Government. Supreme judicial authority is in the hands of the chief justice of the higher court of justice for the Province, who comes under the supervision of the civil governor and acts under the direction of the Ministry of Justice at Peking.

The taoyin or intendants of circuits are officials appointed to administer regions composed of several districts. They come immediately under the direction and control of the civil governor. Within his jurisdiction the powers of the taoyin are similar to those of the governor. The smallest, yet the most interesting, unit of administration in the Province is that of the district magistrate. He presides over a district, or "hsien"; his duties are administrative and judicial. As administrative officer he has charge of the collection of the taxes and issues proclamations having the force of law within the area of his jurisdiction. He attends to the registration of property titles and generally to all the various minute details appertaining to the government of his district. For instance, he is the coroner of the district and must travel to inspect a deceased person who has died under suspicious circumstances. The various towns under the magistrate's jurisdiction possess head men or town elders, who are recognized by him, given a seal, and held responsible for the peace and good order of their respective towns or villages. Judicially the magistrate occupies a position similar to that of a judge of a court of first instance. It is in his court that cases between foreigners and Chinese are brought for trial. The treaties provide that the consular representative of the nation concerned shall be allowed to attend the court and examine witnesses on behalf of his national. The final jurisdiction of the magistrate is limited, but all actions commence in his court. In cases involving foreign interests his jurisdiction is practically unlimited. In Chinese cases his jurisdiction, as stated above, is limited, and where the crime committed involves a penalty greater than he can inflict he holds a preliminary examination. At Changsha there is a commissioner for foreign affairs appointed by the Ministry for Foreign Affairs at Peking, who has general supervision over the various questions that arise between foreigners and the Chinese authorities. As a rule the consulates carry on correspondence with this official whenever matters arise requiring the action of the authorities. The customs is in the hands of foreign commissioners. There are two customs districts in the Province of Hunan corresponding to the two treaty ports, namely, Changsha and Yochow. Each customs district has its commissioner of customs and its customhouse.

EDUCATION.

In addition to the usual drawbacks of lack of teachers and funds, there has been encountered in Hunan a greater difficulty that it was necessary to overcome in order to modernize the system of education in vogue and the educational institutions. This was the friction between the old and new ideas of education, which was particularly strong in Hunan, the most conservative of all the Provinces. Nevertheless, whatever the conditions may have been in the past, there has been in the last decade great progress in the introduction of modern ideas. Temples and public buildings have been turned into schoolhouses to meet the growing demand for modern learning, and Chinese Government schools, private schools, and foreign mission schools are all working harmoniously toward the same goal.

The aim and end of the old system of education was official preferment. The boy prepared himself for examinations held periodically by agents of the Government and had the assurance that, with a little influence and means, he might be appointed to the civil service and possibly reach the highest posts that the Government had to offer. Little knowledge of science or literature was demanded of him in the other walks of life. Modern education, however, has brought about a change and declares that the aim of education is the advancement of social welfare and practical efficiency. A great deal of stress is laid in the new schools on the development of a military spirit. In all schools a certain part of the day is devoted to physical exercises. In some of the higher schools drill, boxing, and fencing are encouraged. Even the new school songs are such as would be calculated to stimulate the martial spirit in the students. All students are required to wear uniforms with the insignia of their school displayed on hat and collar band.

The following statistics, based on information furnished by the office of the civil governor of Hunan, summarize generally the condition of education, public and private, in the Province of Hunan:

DIVISON BETWEEN BOYS' AND GIRLS' SCHOOLS.

Items.	1913-14		1914-15	
	Boys' schools.	Girls' schools.	Boys' schools.	Girls' schools.
Total number of schools	5,441	131	6,973	157
Total number of students	208,591	14,196	278,419	9,699
Total number of graduates	13,650	1,160	13,838	1,141
Number leaving school before end of term	15,047	2,479	18,756	935
Number of deaths among students	895	106	941	63
Number of teachers	14,566	864	15,465	638
Number of employees	7,383	238	10,031	334
Financial statement:				
Receipts	$1,246,659	$104,818	$1,388,457	$114,115
Expenditures	$1,267,533	$100,075	$1,423,590	$120,581
Value of school property	$41,33,003	$191,405	$5,168,507	$219,318

DIVISION BETWEEN PUBLIC AND PRIVATE SCHOOLS.

Items.	1913-14.		1914-15.	
	Public schools.	Private schools.	Public schools.	Private schools.
Total number of schools	3,372	2,200	3.949	3.181
Total number of students	142,682	80,105	155,104	133,014
Total number of graduates	10,465	4,345	9,810	5,169
Number leaving school before end of term	10,097	6,829	12,241	7,450
Number of deaths among students	685	316	684	320
Number of teachers	8,760	6,670	8,022	8,081
Financial statements:				
Receipts	$959,569	$391,908	$1,073,029	$429,543
Expenditures	$1,021,351	$355,257	$1,089,807	$454,364
Value of school property	$3,042,999	$1,281.409	$3,810,388	$1,547,437

According to information furnished by the office of the provincial civil governor for the school year 1914-15, the average number of schools for each of the 75 counties of the Province of Hunan amounted to 95, with an average of 3,800 students in each county. In the year before it was found by the official statisticians that the two counties of Changsha and Pingkiang stood at the head of the list so far as the number of schools was concerned, each of these counties having approximately 500 schools of all kinds. The counties reporting the smallest number of schools in that year were Suining, Kuchang, and Tayung, each of which had not more than 3 schools. All three of these counties are in districts remote from the provincial capital.

There appear to have been in 1914-15 an average of 200 graduate students per county from all schools. The receipts and expenditures in school administration amounted to something more than $20,000 per county, while the average value of school property per county amounted to $70,000. It is interesting to note that the authorities place the area of the Province at 800,000 square li (approximately 88,888 square miles) and they give the population of the Province as 28,000,000, divided into 54,000 families. These statistics of population are reported to be based upon statistics collected during 1913. Using this data as a basis, the authorities find that for each 140 square li (approximately 16 square miles) there is one school and for each 25 families or 126 persons there is one student.

The authorities point out, however—and very justly, too—that these averages would be doubled or trebled if the large number of students who are being educated at home by private tutors should be taken into consideration, for it is still true that there are a great many families that prefer to have their children educated in the home under the care of private tutors rather than to send them to the public schools. The authorities state further that there were fewer than 40 students to each school, on an average, with at least one teacher to each 20 students. The cost of education per student averaged about $10. It is estimated that one out of each 20 students graduated and that one out of each 15 left school before completing the work, while there was one death in each 280 students.

Foreign missionary institutions maintain schools at the various stations in the Province where they conduct their mission work. The following table, based for the most part on statistics given in the Educational Directory of China for 1915, will show the extent and number of these schools:

Town.	Name of school.	Organization in control.	Students.	
			Boys.	Girls and women.
Changsha	St. James School	American Episcopal Church Mission.	54	
Do	Union Girls' High School	American Presbyterian Church Mission United Evangelical Church Mission		30
Do	United Evangelical Girls' School.	do		72
Do	Yale College in China	Yale Foreign Mission Society	143	
Do	Woman's School	American Presbyterian Church Mission		25
Do	do	United Evangelical Church Mission		11
Changteh	John Miller School	American Presbyterian Church Mission	42	
Do	Girls' School	do		20
Chenchow	Girls' Academy	do		45
Do	New China Academy	do	115	
Hengchow	Presbyterian Academy	do	60	
Do	Girls' School	do		30
Liling	Boys' School	United Evangelical Church Mission	50	
Pingkiang	do	Wesleyan Mission	25	
Shenchow	Eastview School	Reformed Church in United States.	40	
Siangtan	John D. Wells High School	American Presbyterian Church Mission	66	
Do	Sunnyside Girls' School	do		40
Do	St. Paul's School	Church Missionary Society	130	
Taoyuan	Yuan Nan Boys' Academy	American Presbyterian Church Mission	30	
Tsingshih	Tsinglan School	Finnish Missionary Society	53	
Yiyang	Norwegian Missionary Society Academy.	Norwegian Missionary Society	65	
Yochow	Lakeside Schools.	Reformed Church in United States.	120	
Do.	Girls' School	do		40
Yungtung	Yung Lan School	Finnish Missionary Society	38	

This does not include various day schools conducted by the missionary organizations, which number several hundreds of students. The Yale Mission conducts a preparatory school and college and cooperates in the maintenance of a medical school at Changsha. This school will be a college with a curriculum similar to that maintained in colleges in the United States. There are about 43 Roman Catholic mission educational institutions in the Province. Among these there are no high schools, and the curriculum does not follow that prescribed by the Chinese Board of Education. The total attendance in these schools is about 1,500 boys and 300 girls.

School supplies and apparatus used by the schools in this district have come generally from or through Japan. The department of sciences of the Higher Normal School is very well equipped with up-to-date modern supplies, and every effort is exerted by the school to make the methods of instruction correspond to the character of the apparatus. The better schools of the Province will continue to use a large amount of foreign apparatus for teaching the sciences until materials of equal quality can be purchased at home; but the tendency is to improve the manufacture of all school supplies locally to meet the increasing demand. As soon as a foreign book becomes popular because it meets the need better than any other, it is reprinted in the East in a cheaper edition, and other things brought from abroad are copied so far as possible.

AGRICULTURE.

It is estimated that 60 per cent of the population of Hunan live by tilling the soil. The principal crops are mentioned in the following paragraphs.

CEREALS AND BEANS.

Rice, both glutinous (*Oryza glutinosa*) and nonglutinous, planted early in May and reaped in August or September, yields 3 or 4 piculs (133 1/3 pounds to a picul) of unhulled rice per mow (1 acre equals 6.6 mow). Good land yields as much as 6 piculs per mow.

Wheat, not grown in sufficient quantities to meet local requirements, is planted in the fall (generally in fields vacated by rice) and is harvested in the spring.

Maize is grown on hillsides with little care or cultivation, resulting in poor crops of stunted ears. It is planted in April and harvested in September.

Beans of the yellow and green varieties, are planted in April and harvested in September. Large crops of these beans are harvested.

Sesame is planted in April and harvested in September. It is grown in large quantities.

Buckwheat is planted in September and harvested in November.

Barley forms a scant winter crop.

Millet, including the variety known in China as kaoliang, is grown in the northern part of the Province as a winter crop.

COTTON.

Cotton is grown in the district north and west of Changteh. The seasons for planting and picking cotton corresponds to those for rice. The cotton grown in Hunan is poor in quality, being of short staple.

RAMIE GRASS AND OTHER FIBERS.

In the Yuhsien, Liling, Liuyang, Changteh, Hansheo, and Yiyang districts, hemp is produced in considerable quantities. *Boehmeria nivea* (*Hooke et Arn.*), rhea fiber, also known as ramie grass or China grass, and colloquially among the Chinese as "ch'u ma" is extensively cultivated throughout these districts. That grown at Liling has a reputation for being of the best quality. The plant is a perennial herb of the nettle family. Only the outer skin of the ramie plant is used. Rev. I. R. Dunlap, an American missionary residing at Liling, described to the writer the process of harvesting this fiber. The culm is broken with the fingers about 2 to 3 feet from the ground and the skin is stripped downward and broken off, leaving the bare stalk, which is later cut away to permit a second growth (there are three crops in one year) to mature. The tops are then taken in from the field and the skin is stripped from them. According to Rev. H. Jowett, of Pingkiang, who is quoted by the commissioner of customs in his decennial report for 1902-1911, the stripped skin is placed in water, to which nothing is added, and is allowed to soak for 24 hours to soften the outer surface of the fiber. It is then taken out of the water and drawn quickly between the edges of two knives, which are fixed so that they are about one-thirty-second or one-sixteenth of an inch apart. This scrapes all the matter from the fiber-bearing skin, which is then sun-dried, bundled, and sold for export. Mr. Jowett states that the fiber is separated by hand to a fineness equalling a 40 count of cotton yarn. Thread is made by twisting together two or more strands. The process is slow; a skilled woman can produce only about 3 ounces per day.

Another fiber that is cultivated in large quantities in the Liuyang district is the ko, *Pueraria Thunbergiana.* This is a creeping inedible bean planted along the dividing ridges between paddy fields. It produces a fiber from which, by a process similar to that described in the case of ramie grass, a cloth similar to ramie grass cloth is produced. The cloth made from this fiber is much softer than ramie-grass cloth and is not so durable nor so white.

Coir fiber is produced and is extensively used locally in the manufacture of rope. Its water-resisting qualities commend it to the boatmen. Coir rope is made by hand, the machinery used being of the simplest type. The first strands of the rope are made by twisting from a pile on the table in front of the operator by means of a kind of distaff turned with the fingers of the right hand. The completed strands are then twisted into a rope by means of a series of revolving hoops turned by hand.

VEGETABLE OILS.

Several varieties of oil-producing beans are cultivated extensively. Among these the best known and most widely cultivated are wood-oil seeds ("tung tzu"), *Aleurites Fordii M. Arg.*, from which the wood oil of commerce, an excellent substitute for linseed oil, is produced. Tea seeds ("ch'a tzu"), from which the tea oil of commerce is produced, are the seeds of the shrub of the Camellia family, *Camellia sasanqua.* Large quantities of tea oil are produced in the Province and consumed there. The oil is used for lighting and for cooking purposes. Foreign kerosene is gradually driving it off the market as an illuminant.

Rapeseed is another important oil-seed crop, the oil being used for purposes similar to those of the tea oil.

LILY ROOTS.

Another very important crop is the lily-root crop. From various starch-bearing roots, such as the rhizomes of the lotus and the bulbs of the common lily, large quantities of arrowroot flour are produced. Each district, generally speaking, has its favorite kind. One very popular variety is manufactured from the root of the lotus, *Nelumbo nucifera Willd.* This is produced throughout China. Another popular variety is produced from the roots of the "ko" plant, *Pueraria Thunbergiana,* which is mentioned above in reference to its fiber-producing quality. The starch or arrowroot flour is made from its roots by mashing them and straining off the water contents, leaving the residuum to dry in the sun.

BAMBOO.

The bamboo is cultivated extensively throughout the Province of Hunan and is used for many purposes, both about the house and in the arts and industries. Rev. H. Jowett of Pingkiang says concerning the process used in making paper pulp from bamboo: "The bamboo is cut into lengths of about 4 to 6 feet, split, and crushed. It is then steeped for several hours in water, to which have been added quantities of quicklime. This rots the bamboo but in such a way as not to decompose the material completely. After being dried, it is pounded to a powder." This operation, it is understood, is performed in a machine that is operated on the plan of a pestle and mortar. According to Mr. Jowett, the pestle is operated by water power. The powdered material is pulped and exported as a raw product.

TEA.

The tea crop of Hunan is a most important one. Both green and red teas are produced. The difference is one of method rather than of variety, the green tea being produced by roasting the leaves over a charcoal fire, while the red tea or "black tea" is the result of fermentation in the sunlight. In the northwestern part of the Province there are three pickings of the tea leaves, these taking place in the months of April, May, and June, respectively.

SWEET POTATOES—PEANUTS—"WATER CHESTNUTS."

Sweet potatoes, peanuts, and "water chestnuts," or "beechi" (*Scirpus tuberosus Roxb.*), are all cultivated in large quantities. The water chestnut or beechi is a favorite delicacy of the Chinese and is generally eaten raw. Large crops of chestnuts and English walnuts are harvested in October of each year. Both nuts are favorites among the Chinese.

FRUITS.

Of fruits the Province produces the pomelo, *Citrus grandus L.*, oranges of various kinds, plums, pears, peaches, apricots, pomegranates, and grapes. The most prominent of these, so far as quantity is concerned, are pomelos, oranges, plums, loquats, pears, and peaches, in the order named.

TOBACCO.

Tobacco is an important crop in southern Hunan, where it is grown in large quantities. It is planted in the early spring and harvested in the early fall. The chief method of curing the leaf is by exposing it to the sun. The leaves are separated from the stalk and fastened flat between two bamboo screens with large interstices. These frames are tilted up in the sunlight so that they can dry evenly. There are two crops, one planted about a month earlier than the other and harvested a month earlier. The earlier crop is considered the better. The tobacco after curing is bound into bales. A large part of the crop is manufactured into water-pipe tobacco. The process is similar to that used in manufacturing chewing and plug cut smoking tobacco in the United States. The leaves are stemmed and laid lengthwise one upon the other in a long, narrow press. Tea oil is one of the substances added. The leaves filling the press are squeezed together, forming a compact block. This block is taken out and turned up on its edge, and operatives using planes especially made for the purpose shave the tobacco, the finely shredded leaf being used in the water pipe, which is a favorite with all classes of Chinese.

PLANTING AND CULTIVATION.

From the foregoing account it will be seen that one or more of the important crops of the Province is always in the ground or is ready for harvesting throughout the year. The winters are not severe enough to put a complete stop to the growth of vegetation. The principal planting season, however, is in the spring, when the rice is put into the ground, and harvesting generally coincides with the beginning of August and extends through the month of September. Truck gardeners in the neighborhood of Changsha utilize their fields for the growing of various vegetables throughout the whole year, one crop following close upon another. In this way the small plot of ground is made to yield the maximum amount of produce.

The intensive system of cultivation is practiced throughout Hunan. Narrow valleys afford very small plots where each farmer must toil diligently to get the most out of his land. The fertile soil yielded by the rocks of the coal measures makes these narrow bottoms especially adapted to the cultivation of rice. Slopes are used for the cultivation of tea and tea oil, sometimes being terraced to a considerable height, when the water supply is convenient, and used for the cultivation of rice. Irrigation is universal, the rice crop especially demanding a steady and copious supply of water. Irrigation methods differ with the location of the ground which it is intended to irrigate. The simplest method used is to guide, by ditches properly placed, the water from some overflowing spring or stream. Where the fields lie above a steady supply of water, a reservoir will be made by placing a dam across one end of the valley for the purpose of catching the rain water that comes down the sides of the hill. Where the fields are level, pools are dug in their midst to collect surface water, and here the water is transferred from the pool to the field by well sweeps, or by two men who hold a pail between them fixed to ropes and repeatedly dip the water out of the reservoir and throw it into the irrigating ditches. Where the field to be irrigated lies beside a river and at some considerable distance above the level of the stream, an ingenious method has been contrived whereby a water wheel—to the circumference of which have been fixed a number of short bamboo tubes closed at one end and tilted away from the river—lifts the water in these tubes, which empty at the top of the revolution of the wheel into troughs that lead the water into the fields. These wheels are turned by the current of the river that supplies the water for the fields, and the farm is thus supplied with an ever-ready quantity of water. Another method much used consists of a wooden trough made water-tight and open at the top. Through this trough passes an endless chain to which are attached paddles the size of the trough, carrying the water from the stream upward to the top and pouring it into the irrigation ditches. This chain of paddles is pulled through the trough by means of wheels, the upper one having an attachment so that it can be turned by a coolie, who uses his feet for the purpose.

All the work done in the cultivation of the crops is carried out with the simplest of homemade instruments—instruments, however, that are well adapted to the uses to which they are put. The broad hoe, a heavy, unwieldy implement, is used almost universally, since it can serve as an ordinary hoe or as a spade. Rakes, made of bamboo or iron crudely cast, are used. The Chinese plow, made entirely of wood except for the iron three-cornered share, is used in the fields for turning up the soil. This plow rarely turns the soil up to a greater depth than 5 inches. The result is that the soil is poorly broken, and the most successful results of plowing are not obtained. However, this fault is probably not felt very keenly in the case of rice farming, as water is kept standing in the fields throughout the growth of the plant. A kind of harrow is also used. It sometimes takes the form of a gigantic iron comb with teeth far apart and is used to complete the breaking up of the soil in the water-soaked rice fields after plowing.

Bullocks and cows are used for dry plowing sometimes, but the water buffalo is the favorite farm animal. He is a powerful beast and well suited for his work, especially the pulling of the plow through the 1 or 2 feet of mud and water of the paddy field. Nearly every farmer owns at least one or two buffalos; if he is too poor to own one himself he goes into partnership with one or two other farmers. The horse is practically unknown on the farms. Small ponies are used in the more mountainous districts of the Province as pack animals. Crops are moved from the field to the farm granaries and from the farm to the market on the backs of coolies or by boat. Sometimes the wheelbarrow is used. In the districts along the river banks where reeds are cultivated one sometimes sees crude four-wheeled wagons drawn by a couple of bullocks, but their use is limited to the level reed beds. There are no roads in the Province upon which wagons can be used.

USE OF FERTILIZERS.

Fertilizers are used universally by the Chinese farmers of this district. Because of the lack of any great number of cattle, night soil is used generally, the greatest care being taken everywhere to collect and preserve it for the use of the farmer. Other fertilizers used are bean cakes (and other residuum left during the manufacture of vegetable oils), bone dust, bits of meat refuse, hair, wood ashes, and in fact anything that has the slightest value as a fertilizer—all is saved, cast into the general pit or mound, and used. The ponds or reservoirs from which water is drawn for irrigation purposes are generally stocked with fish, and the slime from the bottoms of these ponds, rich with the waste products of the fish, is smeared over the fields. Paddy fields are often allowed to lie fallow during the winter and a kind of purplish red clover (*Astragulus sinicus*) is grown. Rice fields are fertilized from small, deep pits located either in the center of the field or on one side. Into this pit the fertilizer is poured and allowed to stay, and when the paddy field is flooded the fertilizer seeps through into the soil. In the case of truck gardeners, wood ashes or bone dust is poured around the young and growing plants. The Chinese farmer is an adept at forcing growth. He allows no weeds to take away the life of the soil from the growing crops.

GENERAL CONDITIONS IN FARMING COMMUNITIES.

Generally speaking, the actual farmer of Hunan leads a hand-to-mouth existence. Absentee landlords are the rule. Clan and individual wealth is reckoned in numbers of acres owned. The land is often situated at a considerable distance from the village where the clan or individual owner resides. Extra funds are generally invested in land. The result is that perhaps 75 per cent of the actual tillers of the soil in Hunan are tenant farmers. They pay their rent in kind to the landlord, generally once a year. The rent is paid in unhulled rice, 40 to 50 per cent of the harvested crop going to the landlord as rent, while the remainder is the property of the farmer. The farmer stores away enough of his crop for seed purposes and to feed his family against the next harvest. The surplus grain is generally bartered at the nearest village for household necessities or luxuries or is sold outright to the rice merchants. A system of loans on crops exists. In the country villages it centers about the village pawnshops, which advance money on the crops and, it is understood, store the grain during the period of the pledge. When the new rice comes into the market, a great deal of speculation takes place and the authorities find it necessary to place embargoes on the exportation of the rice in order to prevent scarcity. These embargoes are of two kinds—one kind applies to the Province as a whole and forbids the exportation of rice except over and above a certain fixed quantity that is considered necessary for the support of the Province; the other forbids the movement of rice from one district to another, in order to prevent local scarcity and the cornering of supplies by individuals for the purpose of raising prices.

Wheat and rice are brought to the market by the farmer and sold to the buyers. The grain is stored in granaries near the fields until sold, when it passes into the hands of the buyer or of the bank that has financed the buyer's operations. In the latter case it very often passes entirely into the possession of the bank, to be delivered to the buyer at some other place upon payment of the price. Transportation is by means of coolies, wheelbarrows, or boats.

Hunan exports tea, beans, bristles, grass cloth, ramie fiber, human hair, hides, wood oil, and sesame seed. The broad bean is produced for exportation to European countries for cattle food. Wood oil is exported in increasing quantities, especially to the United States, where it has found favor with manufacturers of quick-drying varnishes.

LIVE STOCK—EGGS—FISH.

In the mountainous districts to the east, south, and west, small ponies are used as pack animals. Nearly every farmer has his buffalo or cow. The cow and buffalo are used for the heavy farm work. The cow is only beginning to be used for its milk. Goats are generally kept and they are killed for their meat; they are also kept for their milk. Goatskins, goat hides, and buffalo hides are exported from the Province in considerable quantities.

Large quantities of eggs are produced in the Province but are, for the most part, consumed locally. An interesting method of preserving these eggs is used. They are coated with a preparation of clay (about 6 parts), rice chaff (about 30 parts), and salt (about 10 parts). The eggs so preserved are said to keep for one or two years. They are packed in earthenware jars while the clay is still damp, and sealed up. Such eggs are called "salted eggs" and must be cooked before they can be eaten. They are said to have a slightly salty flavor. Another method of preserving eggs is by using lime. Eggs preserved by this method become hard after the fashion of hard-boiled eggs and turn a dark green color. They keep indefinitely. They are sliced and served as a delicacy.

A large business is done in the raising and marketing of ducks. Both ducks and chickens are killed, cleaned, and cooked, or are preserved with salt. Considerable quantities of chickens have been shipped from the Province to Hankow, where they are frozen for the European market.

Hunan pork also finds its way to the Hankow market for shipment to Europe. Hunan pigs are raised under more cleanly conditions than those prevailing in other Provinces. The meat is white, firm, and of excellent flavor.

Siangtan has a thriving industry that occupies itself with the raising of fish. Fish spawn are collected from the river in spring and are fed and grown in shallow ponds located within the city walls. Early in the summer they are taken from the ponds and classified and are peddled throughout the country, being purchased by the farmers for stocking the irrigation reservoirs on their farms.

WEAVING OF HATS AND MATS—PRODUCTION OF CLOTH.

Southern Hunan produces a grass known among the Chinese as "dragon's whisker grass" (*Juncus effusus Deth.*) This grass, when dried, is collected into bundles and is used for weaving hats and mats. The texture of the hats and mats woven from this grass is similar to that of the Panama hat. The material, however, is lighter, not so durable, and of a dark yellow color.

Hand looms are used in large numbers throughout the Province, both by individual families for the production of cloth for family use and in groups of from 5 to 20, in shops especially made for the purpose or in spare room in silk or food shops, where they are used for the production of striped cotton known to the trade as nankeens. Part of the nankeens manufactured locally are exported from the Province.

MINERALS AND MINING.

Hunan's mineral wealth is very large. The number of minerals in the Province has not yet been completely determined. The Hunanese have been miners, according to their own historians, since the time of the Chou Dynasty (1122 to 255 B. C.), during which time this part of the country paid tribute of cinnabar and silver to the emperor.

ANTIMONY.

Antimony is by far the most important mineral product of the Province. China is the chief source of the antimony supply of the world, and Hunan is the center of antimony production in China. This mineral occurs at numerous places in the Province, but the principal mines are located in central Hunan. Much the most important field is located at Hsikengshan, about 22 miles east of Sinhwa on the Tzu River. The ore is stibnite, or antimony sulphide partially oxidized in the outcrop zone, and it occurs in the form of seams, pockets, and masses generously distributed throughout a layer of limestone varying in thickness up to 45 feet. The P'an Hsi mines are located about 25 miles south of Chanhsi, a small town on the Tzu River some 36 miles above Yiyang. The surrounding country is mountainous and composed of sedimentary strata tilted and bent by granitic intrusions but not much marked. Four mines are being worked here. The ore bodies are of the fissure vein type, the ore occurring in sheets. These have been worked down to depths varying from 150 to 500 feet. The ore is stibnite. The average width of the veins probably does not exceed 15 inches, though very occasionally they swell out to 5 feet. Other mines of less importance are the Wu Hsi in Shenchowfu, the Hua Pan Hsi at Nanhuahsien, and the Chiang Hsi Lung in Chupuhsien. These are geologically similar to the P'an Hsi mine, the ore being, however, of a higher grade.

LEAD AND ZINC.

Lead and zinc deposits occur in the southeastern part of the Province. The extraction of this ore would appear to be of ancient origin in the Province, as writers refer to vast slag heaps to be found at Kweiyangchow and to the southeast of Chenchow. The industry is now said to be practically extinct, with the exception of a few small mines producing lead and zinc ore and by-products from the associated minerals. The only lead and zinc mine of any importance is the one at Shuikoshan, controlled by the government of Hunan. It is situated about 32 miles south of Hengchow on the Siang River, the works lying at a distance of 4 miles from the river. The ore deposit consists of large, irregularly shaped bodies of mixed galena, zinc blend and iron and copper pyrites. Official records covering the past 20 years show that the mine has produced during this period more than 50,000 tons of lead concentrate and 126,000 tons of zinc concentrate, but there were extensive native workings prior to 1896.

TIN.

The tin fields of Hunan are situated in the most southerly portion of the Province, close to the Kwangtung border. The An Yuan mines in the Ichang district show the largest output at present. Mr. A. S. Wheeler, in an article published in the Far Eastern Review for

September, 1915, (to which account of the metalliferous mines of Hunan Province the writer is indebted for most of his information on the subject) states that the tin deposits that are being worked at this place are quite exceptional in their nature and are of a type which, so far as he is aware, is known at only three or four places in the world. He says, in his description of the deposits:

> The formation is limestone tilted and marmorized by the granite mass. A dyke of granite, probably of more recent date than the main mass, has penetrated the limestone, and along the course of this are found true chimneys or pipes of tin ore, associated with arsenical pyrites, actinolite, and a little copper pyrites and fluor spar. The pipes are roughly circular or oblong in cross section, varying from 20 feet downward in diameter. The maximum depth reached is about 400 feet, and the dip of the pipe ranges from horizontal to vertical.

The Hsiang Hua Ling tin mines are situated in Linwuhsien about 16 miles north of Linwu in the extreme south of the Province. Five companies are at work there, of which the Hunan Provincial Mining Bureau is the most important. Fissures are numerous, but apparently of short lateral extent, well defined. The associated minerals are arsenical iron and copper pyrites, with occasional bunches of fluor spar. At Kianghwa to the west of Linwu there is an extensive tin field extending southward into Kwangsi and Kwangtung Provinces, which has by no means been thoroughly investigated as yet. Native operations have been more or less confined to the alluvial deposits found on the tops and sides of the hills. The tin occurs in association with tourmaline, iron, and arsenic. The output from the entire field is stated to be greatly in excess of that in either of the two previously mentioned, and it would be greater except for the fact that the miners have suffered much interruption and discouragement as a result of local conditions. Arsenic is produced for the most part as a byproduct from the treatment of tin ore carrying arsenical pyrites, as previously explained. Realgar (arsenic bisulphide) is mined near Tzuli north of Changteh. The deposit is said to be of considerable size and high grade.

QUICKSILVER.

Quicksilver is produced to the west of Fenghwangting in western Hunan adjoining the Kweichow border. The mines appear to have been worked intermittently for several centuries. Two mines are reported worked at present, one at Hantzuping, situated some 20 miles west of Fengchuang, and one at Tatungla, situated 25 miles to the southwest of that town. The ore is cinnabar (mercuric sulphide). At both mines the richer picked ore is crushed by hand and panned down for the cinnabar content; the poorer ore and tailings from panning are retorted for their quicksilver content.

GOLD.

Gold is washed at several places in the Province, but it is not believed that the amount secured is remunerative. The chief gold mines of the Province are located at Pingkiang in northeastern Hunan, close to the Kiangsi border. These mines are controlled by the Hunan Provincial Mining Bureau. Other gold mines exist at Suashapo, near the village of Tafuhsi on the Yuan River in the district of Taoyuan, at Liulincha, some 6 miles from the village of that name in the district of Shenchow, and at Huitunghsien in the southwestern quarter of the Province.

COAL.

The coal fields of Hunan occur principally between the Siang River and the eastern border of the Province. Richthofen estimates the area of the eastern fields to be approximately 16,200 geographical or 21,700 statute square miles, but points out that, of a great part of the area, probably more than one-half is covered by sediment many thousand feet in thickness more recent in age than the coal formation. He divides the coal fields of Hunan—the eastern part—into two nearly equal portions, calling one the Lei River field and the other the Siang River field. Of the Lei River field the most important region is situated on both sides of the Lei River between Yunghsinghsien and Hsingminghsien. All the coal of this district is anthracite. The Siang River coal field is made up of a reappearance of the coal measures north of the Lei River field where the Lei River joins the Siang. Here, however, the measures are quite different in character from the formations in the Leiyang coal field and probably precede them in age. They bear altogether bituminous coal. Coal is also found in the western part of the Province around Shenchow and Yuanchow. Fairly large deposits occur in the district about Paoking, whence the coal is exported by the Tzu River to Hankow.

OTHER MINERALS.

Other minerals produced include sulphur, manganese, graphite, and alum. Sulphur is produced principally at Pingkiang, Hsinhua, and Chenchow. It is obtained for the most part by the destructive distillation of iron pyrites. Rich deposits of manganese are reported. The principal working deposits appear to be near Leiyang and Changning, south of Hengchow. Graphite and alum come from the same region. Iron is produced in small quantities in the central and south-central parts of the Province, Paoking being the center of the iron-producing district. Copper occurs at Kiyang and Suining at the extreme south of the Province.

CHINESE MINING ENTERPRISES, PRIVATE AND GOVERNMENTAL.

The administration of mining affairs is entirely in the hands of the Chinese Government. Satisfactory regulations for admitting foreign capitalists to participation in Chinese mining enterprises have not yet been devised. The result is that little or no foreign capital has been invested in Hunan mines. There are no mines in Hunan at the present time under foreign control. The mines in operation are all worked by Chinese companies and are divided between private enterprises and those carried on by the provincial government. The most prominent of the private enterprises is that of the Hua Chang Mining and Smelting Works, which has opened and exploited a number of antimony and lead mines in different parts of the Province. This company has its own smelting and refining plant at Changsha and has a monopoly of the manufacture of antimony regulus in the Province.

The most prominent of the provincial government mining enterprises is that of the Shuikoshan lead and zinc mines. This property is run on foreign lines and is said to be the largest of its kind in China. It is well situated as regards transport and accessibility. There is a modern plant near the mine for the treatment of the ore and the production of lead and zinc concentrates. The capacity of this plant is about 50 tons per day. A new foreign plant with a capacity of 100 tons per day is in course of erection. A narrow-gauge railway connects the mines with the river at Sungpoau, where an experimental lead and zinc smelting plant using native methods has been established, in which both lead and zinc, as well as silver, are being produced.

ATTITUDE TOWARD FOREIGN INVESTMENTS.

The official attitude toward foreign investments is characterized by caution and a fear that the free introduction of foreign capital into Chinese mining enterprises will take the mining property away from Chinese official control. Every obstacle has therefore been placed in the way of allowing foreign investors a free hand. The result has been that Chinese mine owners find it extremely difficult to get foreign investors who are willing to share in their enterprises. The only practical way out of their difficulty that they have found is for the mine owner to enter into a contract with the foreign capitalist, pledging his property as security for a loan made by the capitalist. Payment of principal and interest, as in the Carlowitz contract with the provincial mining bureau, is accomplished by delivery of ore to the foreign capitalist, who markets it, crediting the mine owner with the value of the ore at the market price prevailing on the day of delivery. Sometimes the foreign capitalist delivers machinery rather than any actual sum of money, obtaining payment in ore.

INTRODUCTION OF FOREIGN MACHINERY.

Except at the Shuikoshan mines mentioned above, little or no foreign machinery was used in the Province until the end of 1915. Foreign machinery—that is, hoisting and extracting machinery, drills, air compressors, narrow-gauge railways for transportation of ore—is being introduced into a number of mines that have profited by the increased demand for antimony during the past few years. The enterprise chiefly interested in this expansion is the Hua Chang Mining & Smelting Co. above mentioned. The future promises well for the increased use of such mining machinery, for while labor is plentiful, it is unskilled and wasteful. The experiences of some recent years, when many mine owners were unable to enter the market with supplies because of their inability to produce rapidly, has taught the Hunan mine owner the advantage and economy of using foreign labor-saving machinery in the development of his property. With the unskilled labor to which he has been accustomed, he has often found it necessary in the past to close down his mines completely because of the partial exhaustion of the ore supply, due perhaps to the meeting of some temporary fault in the vein. Some of the mineral-bearing districts are located at a distance from river transportation, and road-making machinery or small railway materials will be required in order to facilitate transportation of the products of the mine. A market for all such materials offers itself now, and the prospect is that the demand will increase. The past two years brought considerable supplies of capital to the Hunan miners from their sales of antimony, and these men are apparently ready to invest this money in the improvement of their property.

EXPORTS OF MINERAL PRODUCTS.

The following table shows the quantities of mine products declared for export through the Changsha customs during the six years 1913 to 1918:

Metals.	1913	1914	1915	1916	1917	1918
Antimony:	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Regulus	4,717,467	6,126,400	13,018,933	14,175,333	29,608,267	33,185,600
Crude	15,487,267	33,011,333	32,992,400	28,518,400	42,665,783	2,119,040
Ore	9,338,533	20,980,533	2,029,467	602,583	201,600	716,800
Ash	14,100,800	5,718,667	11,092,400	27,912,667	732,533	....
Lead ore	7,945,333	8,833,467	461,467	17,655,467	31,075,467	3,902,080
Steel bars	152,933	98,000	199,867	80,800	156,533	387,520
Tin, in slabs	396,000	290,667	68,667	121,200	99,733	91,840
Zinc ore	21,853,333	28,217,333	12,285,333	1,383,200	14,533	4,480

COMMUNICATIONS: GENERAL INTRODUCTION.

As regards trade and trade routes, the Province of Hunan may be divided into two parts, the western and the eastern. This division is a natural one and is determined by the trend of the great trade routes of the Province. The western portion includes all of the country drained by the Yuan and Li Rivers and their tributaries, down to where these rivers enter the Tung Ting Lake. The eastern district includes all the rest of the Province, drained by the Tzu and Siang Rivers and their tributaries. The city and treaty port of Yochow, located at the place where the Tung Ting Lake drains into the Yangtze River, stands at the dividing point.

Ordinary land transportation facilities throughout these two districts are to-day what they were 2,000 years ago. Freight is carried on the backs of coolies, on wheelbarrows, and by pack ponies to the waterways, where it is put into boats ranging from small bamboo rafts or sampans, capable of conveying not more than half a ton of cargo, to junks carrying nearly 30 tons. Passengers walk, ride in wheelbarrows, or are transported in chairs carried by coolie bearers.

COLLECTING AND DISTRIBUTING CENTERS—WATER TRANSPORTATION.

The Province has three large collecting and distributing centers for trade. These are: Western district—Changteh (customhouse located at Yochow). Eastern district—Siangtan and Changsha (customhouse located at Changsha).

Western district.—From Changteh trade finds its way north, west, and south to the various cities of northern and western Hunan. The Yuan River, which empties into the Tung Ting Lake near Changteh, forms one of the chief trade routes into the Province of Kweichow from Central China. It is the chief trade route of the western district. Its navigation throughout is difficult and dangerous, rapids commencing some 90 miles above Changteh and continuing all along its course and those of its affluents. Boats leaving Changteh do not carry more than 3½ tons of cargo. When they get to within 200 miles of Yuanchow their cargo is unloaded into smaller vessels drawing not more than 16 inches and loading about 1½ tons. These boats ascend the river to Hwangping in Kweichow. All of this river's affluents are navigable, but few by vessels loading more than half a ton of cargo. Freight is consequently very expensive. The Yuan River serves a basin with an estimated area (cf. Richthofen) of 26,100 geographical or 34,300 statute square miles, of which 16,650 geographical or 22,500 statute square miles are situated in Hunan (including a small corner of Szechwan) and 9,000 geographical or 12,500 statute square miles in Kweichow (cf. Richthofen). Above Changteh the river craft are all of the native Chinese type, all flat-bottomed, square-bowed junks propelled by sail, oar, or towrope. Small launches or towed lighters connect Changteh with Changsha, Yochow, and Hankow. During the summer months when the water is high in the lake, shallow-draft passenger steamers ply between Hankow and Changteh. Changteh has an estimated population of 150,000. There has been a good deal of discussion as to the advisability of making Changteh an open port, but nothing has yet been done to accomplish this end. Other important centers of trade in the Yuan River basin are Shenchow and Yuanchow, both places serving as distributing centers for their immediate neighborhoods. Changteh is connected with Shasi on the Yuan River by the Taiping Canal, which is of inconsiderable importance as a trade route. The Li, or Ling, River, which belongs to the western district, drains an area of 6,000 geographical or 8,000 statute square miles. It is navigable only in its lowest portion.

Eastern district.—The Tzu River serves the central part of the Province and flows into the Tung Ting Lake not far from the city of Yiyang. It is navigable only by the smallest kind of boats, which must be pulled up dangerous rapids. It is known to the Hunanese as the T'an Ho or "river of rapids." Its basin covers an area of 7,500 geographical or about 10,000 statute square miles and enjoys easy connections by land with the basin of the Siang River to the east, upon which it depends for supplies and for the sale of its own products. The land routes connecting the basin of the Tzu River with that of the Yuan River are more difficult because they are longer. It is for this reason that the basin of the Tzu River is included in the eastern trade district. Yiyang stands at the limit of launch navigation on this river and is its principal trade center. Shallow-draft steam launches and motor vessels connect Yiyang with Changsha and Changteh. The Siang River is the most important of Hunan's waterways because it is easiest of approach and it commands the largest area. It is navigable high up in its course by vessels loading nearly 30 tons, while all of its numerous and extensive ramifications are partly accessible to the same large-draft boats and to small boats for considerable distances.

The basin of the Siang River, with the cities of Changsha, Siantan, Liling, Hengchow, Paoking, and Yungchow as nuclei, serves as a distributing center for western Kiangsi to the east, Kwangtung and Kwangsi to the south, and the basin of the Tzu River to the west. The area of the Siang River basin is 28,800 geographical or 39,000 statute square miles.

The number of craft plying on the Siang River throughout the year is very great indeed, and necessarily so when one considers the tremendous area that it serves. Launches drawing 3 feet ply as far up the river as Hengchow. The river is obstructed by a number of dangerous submerged rocks about halfway between Siangtan and Hengchow, which make navigation of these upper reaches difficult for boats of more than a certain length. The longest boat that has made the journey successfully thus far has a length of 160 feet. It is the intention of the provincial government to take measures for the removal of these rocks in the near future, when it is expected that it will be possible for shallow-draft vessels to reach Hengchow nearly all the year round. Shallow-draft foreign and Chinese owned passenger steamers drawing from 6 to 8 feet of water connect Siangtan and Changsha with Hankow throughout the summer or high-water months. December, January, and February are the months of lowest water, when navigation for vessels drawing more than 3 feet is impossible above the city of Yochow. During these months passenger traffic is limited to small and very crowded steam launches, while cargo is moved in lighters towed by steam tugs.

With a description of the Tung Ting Lake, the discussion of Hunan's waterways is completed. This so-called lake is really a great level space of silted lowland; dry in winter, when it is traversed by the winding watercourses of the rivers that drain into it from the south and west, it becomes flooded in the summer when the spring and summer rains fill up the rivers of Hunan and their waters rush down to meet a rising flood from the overburdened Yangtze, yellow with the waters and melting snows of Szechwan. The lake is about 75 miles long by 60 broad in summer. Modifying its aspect according to the seasons and the rise of the waters, it is, however, the center of a very active movement of boats. Thousands of junks carrying rice, timber, coal, and salt traverse it unceasingly. Immense rafts composed of an assemblage of beams, planks, and bundles of bamboo attaining sometimes 330 feet in length—in fact, floating villages with their huts to house the raftsmen—traverse its waters, all making their way to or from the Yangtze. A network of canals surrounds the lake.

Totaling the areas of the river basins as given by Richthofen, one obtains the following very interesting results: Siang River, 39,000 statute square miles; Tzu River, 10,000 square miles; Yuan River, 22,500 square miles; Li River, 8,000 square miles; total, 79,500 square miles. When one remembers that the area of the Province, according to the Chinese maps, amounts to 84,000 statute square miles, it will be seen that only about 5 per cent of the total area of the Province is not accessible to its waterways—a remarkable state of affairs which accounts for the fact that the population of the Province has never felt a pressing need for roadways.

CHINESE JUNKS.

Rates of transportation by Chinese junks are arranged between the shipper and the junk guilds. There appear to be no published rates, and such rates as exist are subject to extreme and sudden fluctuations by reason of disturbances in the Province, shortage of boats, and other causes such as difficulties of navigation resulting from high or low water. These rates do not appear to vary with the volume of cargo carried. The following rates have been given to the writer as normal rates on shipments of kerosene oil to various points in Hunan Province and to Chenyuan, a shipping center of Kweichow:

	U. S. gold per unit.
From Changsha:	
To Changteh, 190 miles	$0.01½
To Hengchow, 180 miles	.01
To Siangtan, 28 miles	.00½
To Yiyang, 90 miles	.01
From Changteh:	
To Shenchow, 160 miles	.03½
To Hungkiang, 280 miles	.08
From Hungkiang:	
To Yuanchow, 80 miles	.04
To Chenyuan (Kweichow), 225 miles	.11

FOREIGN SHIPPING COMPANIES.

Three foreign shipping companies maintain regular steamers plying on the Siang River between Changsha and Hankow. Butterfield & Swire, agents for the China Navigation Co. (Ltd.), have two steamers, the *Kian* and the *Shasi*, which make regular trips throughout the summer months. These vessels visit Siangtan, an unopened port about 30 miles south of Changsha, for the purpose of collecting freight. A Japanese firm, the Nisshin Kisen Kaisha, maintains regular sailings between Changsha and Hankow, having three steamers, the *Yuan Kiang Maru*, the *Siang Kiang Maru*, and the *Wooling Maru*. Jardine, Matheson & Co., a British firm, maintain one steamer, the *Chang Wo*, throughout the shipping season from March to November, and add the steamer *Tung Wo* during the busy midsummer months. One Chinese company known as the Chung Hua Steamship Co., maintains a direct steamer service between Changsha and Shanghai, having one vessel, the steamer *Hua Sheng*. It is reported that this company intends to extend its service in the near future, The Standard Oil Co. of New York and its British competitor, the Asiatic Petroleum Co. (Ltd.), maintain their own floating equipment for the conveyance of their oils and cargo from the distributing centers at Hankow and Shanghai to the various points in Hunan that are accessible to steamers. These vessels are light-draft motor-driven barges, and they are able to go as far south as Hengchow on the Siang River and make regular trips to Yiyang and to Changteh in the west. There is a large launch-borne passenger traffic throughout the year between Siangtan, Changsha, and Hankow. The opportunity offers for the successful use of commodious shallow-draft motor or steam-driven ferries between Changsha and Siangtan. Such an enterprise should be a profitable one. At the present time this passenger traffic travels on small, ill-kept steam launches.

DUTIES AND TAXES ON FOREIGN CARGO.

Foreign cargo entering the Province of Hunan comes generally through one of the two large importing and distributing centers on the Yangtze, Shanghai or Hankow. Upon being imported, it pays the prescribed duty, which is generally 5 per cent ad valorem. Various internal taxes exist. The most troublesome tax is the likin tax. This tax, as well as all other taxes en route, may be avoided in the case of foreign imports if the foreign importer will pay a surtax equal to one-half the import tax on his goods. He then obtains what is known as a transit pass, which will carry his goods free from taxation to their destination in the interior. Very often, however, merchants find that the likin is less than the 2½ per cent surtax. In this case the merchant prefers to pay the likin. He imports his goods and obtains from the likin office a pass which operates in exactly the same manner as the transit pass above mentioned. Cargo shipped into Kweichow Province from Hunan is required to pay a boundary tax in addition to the likin that it has had to pay in Hunan Province. Cargo shipped from Hupeh and unaccompanied by transit pass through Hunan to Kweichow is required to pay, first Hupeh likin, then Hunan likin, and third Kweichow likin. A destination tax is levied on the cargo at the point where it is sold for consumption. Likin charges are not necessarily the same in all of the Provinces. For instance, on kerosene oil, likin is levied in Hupeh at the rate of 22 cash per unit; in Hunan, this tax is 32 cash per unit (50 cash at the exchange rate of 1,800 equals $0.03, which at the rate of $1 Mex.[1] to $0.50 gold equals $0.01½ gold).

RAILWAYS.

Hunan has two railways in operation. These are (1) the Changsha-Wuchang and Changsha-Chuchow sections of the Canton-Hankow Railway, constructed by Chinese with capital raised locally, and (2) the Pinghsiang-Chuchow Railway, constructed and operated by the Pinghsiang coal mines for the primary purpose of conveying the coal and coke from the mines at Pinghsiang in Kiangsi 60 miles to Chuchow, for shipment to the iron and steel works at Hankow.

On September 16, 1918, regular trains having first, second, and third class accommodations began to be operated daily between Wuchang and Changsha, as a result of the completion of that section of the Canton-Hankow Railway.

The trunk line connecting the railway and commercial center of Hankow on the Yangtze with the southern port of Canton, which is being built under British supervision in accordance with the provisions of the Hukuang loan agreement of 1909, was nationalized by the loan agreement and put under the control of the Ministry of Communications. It purchased the line known as the Changsha-Chuchow line, which has been referred to above and which had been constructed with provincial capital. Surveys of the section between Changsha and Yochow and Yochow and Hankow were completed by the British engineers in 1912, and construction was begun in that year.

The chief engineering difficulties encountered were the large number of bridges. It was necessary to construct two bridges of 500 and 600 feet across the Sinkiang, a 1,200-foot bridge over the Milo River, a 450-foot bridge over the Lao Tao River, and a 600-foot bridge over the Liu Yang River. In addition to these, and most difficult of all, was a very high bridge over the Lu River, 1,000 feet in length. These were the longest bridges. There were a number of others and many culverts, as the road passes through the flood plains of the Siang River for a good portion of its length.

The total distance of the road between Changsha and Wuchang or Hankow is 225 miles. It will accomplish much toward making Changsha accessible throughout the year by rail to Peking and Hankow.

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[1] See footnote on p. 84.

Through train service is maintained between Changsha and Pinghsiang, a distance by rail of 95 miles, one train a day being run each way. Seven hours is consumed in the journey. The first-class fare is approximately $1.50 United States currency. Freight is divided into five classes and a graduated scale of freight rates used, based on distance run and class of goods carried.

The headquarters of the Changsha-Wuchang and Changsha-Chuchow sections of the Canton-Hankow Railway are located at Changsha. The director of the Pinghsiang-Chuchow line resides at the city of Liling. Both roads are under the control of the Ministry of Communications. It is intended eventually to make Liling the junction of three railways—that is, the Changsha-Chuchow or Canton-Hankow Railway; the Pinghsiang-Chuchow Railway; and the Nanchang-Changsha Railway, route surveys for which were completed during the winter of 1915–16.

From Chuchow to Liling the Canton-Hankow line will follow the route of the Pinghsiang-Chuchow Railway. From Liling it will run south through Yuhsien and Chaling and will probably touch the city of Chenchow before crossing the boundary into Kwangtung.

The Nanking-Nanchang-Changsha line is a portion of a trunk line that has been planned to connect Changsha with Hangchow and Ningpo in the Province of Chekiang. The completed roads connecting Ningpo, Hangchow, Shanghai, and Nanking will form one section of this road. From Nanking to Nanchang, the capital of Kiangsi Province, the road is to be continued and will be extended from Nanchang to the Hunan border somewhat north of the coal mines at Pinghsiang, thence south to the city of Liling, where, as stated, a junction will be made with the Canton-Hankow and Pinghsiang-Chuchow lines. This road will be of the greatest importance to the Province, affording as it will a direct connection between Hunan and the sea, and an outlet for Hunan's tremendously rich coal and ore deposits. This road will be constructed by British capital under the control of the Ministry of Communications. The managing director's office is at Nanking. Surveys of the route to be followed were completed in the winter of 1915–16.

Another road of importance, second only to the Nanking-Changsha line, has been projected to connect the Yangtze River trade mart of Shasi with Changteh, the chief distributing center for the Yuan River basin in Hunan. It will be extended from Changteh, following the course of the Yuan River west, to the Province of Kweichow and to the city of Singyifu in the southern part of that Province. An agreement was entered into in December, 1913, with Pauling & Co., a British firm. Surveys of the route of this railway have been completed. The line will follow the basin of the Yuan River in Hunan. It is proposed to connect Changteh with Changsha by a branch road.

The completion of the railways planned will make Changsha an important railway center.

A recent enterprise is a proposed line from Chuchow through Paoking, Kweilin, and Liuchowfu to Nanning, and thence to the sea at Yamchow (Chinchow), or Pakhoi. An alternate route from Liuchowfu runs through Kweihsien southwest to Kwangchow. An alternate northerly route follows the Canton-Hankow line to Hengchow, passing thence through Yungchow to Kweilin.

ABSENCE OF TRAMWAYS.

No tramways exist in the Province of Hunan. The reason is simply that projects for the construction of such lines have never been seriously broached. It is believed that considerable water power is available in the central part of the Province, especially along the Tzu River, which could be developed for the purpose of furnishing electric power for electric railways, to the great benefit of the mining interests and passenger traffic between the cities of the interior of the Province. The large coal fields of the Province are another source of energy that could be used for the electrification of railways. Development along this line awaits some enterprising organizer of capital and is sure to meet with success.

ROADS.

There are almost no cart roads in the Province upon which four-wheeled vehicles drawn by draft animals or propelled by motor could be used. Such roadways as do exist are narrow footpaths which have been used for centuries and which, paved with a single line of heavy stone slabs, are well suited for the wheelbarrow, pedestrian, and single-file chair-bearer traffic that makes use of them. Chinese maps give two ancient courier roads through the Province. One from the city of Wuchang in the Province of Hupeh enters Hunan in the northeast corner and passing through Yochow turns south to the provincial capital, Changsha, whence it follows the valley of the Siang River south to Hengchow. From Hengchow it follows the valley of the Lei River and passes through the cities of Leiyang, Chenchow, and Yiyang, where it crosses the provincial boundary into the Province of Kwangtung and proceeds to the city of Canton. This road connected Canton with Peking in the past. Richard states that it is paved throughout and furnished from end to end with inns, warehouses, and cattle sheds, all bespeaking the great activity that prevailed throughout its length. The route of the Canton-Hankow Railway will follow this road.

The second courier road enters the Province from Shasi in Hupeh, passes through Lichow in northern Hunan, touches Changteh, and then proceeds west and south up the valley of the Yuan River through the cities of Shenchow and Yuanchow and across the boundary to the city of Kweiyang in the Province of Kweichow. A branch connects this road at Changteh with the provincial capital of Hunan, Changsha. This road is the highway for traffic between the Yangtze Valley, Hunan, and the Provinces of Kweichow and Yunnan. The route of the proposed Shasi-Changteh-Singyifu Railway will follow this road. All the cities in the Province are connected by narrow roadways accommodated to the pedestrian and wheel-barrow traffic.

The two routes described above are the chief roads of the Province and the chief trade routes. Other important trade routes are (1) to Fukien by way of Pinghsiang through Kiangsi to the affluence of the Min River of Fukien and (2) to Szechwan. There are two trade routes to Szechwan from Hunan Province. The first is by the Taiping canal connecting Changteh with the Yangtze opposite Shasi. This route is followed in summer, winter traffic going by way of Yochow and the Yangtze. The second route is by way of Changtehfu over the courier road to Shenchow and thence to Yuyang and Fuchow in

Szechwan. There is a third but very difficult route to Szechwan that is used by travelers and those merchants who carry valuable goods in a small compass. It runs through Tzulihsien, Yungtinghsien, Lungshanhsien, Leifenghsien, and Kienkianghsien to Pangshinhsien, whence boats are taken down the Kien River to the city of Fuchow in Szechwan. A trade route connects the important mining center of Paoking with Siangtan by way of Hsianghsiang. Paoking is connected with Yuanchow by way of Wukang, and with Changteh by way of Sinhwa, Anhwa, and Taoyuan. Another and very important trade route parallels the first-described courier road and runs the entire length of the eastern part of the Province from Yochow through the cities of Pingkiang, Liuyang, Liling, Yuhsien, Chaling, Anjen, Yunghsing, and Chenchow to Yichang. A trade route of considerable importance connects Yungchow—in the far south of the Province on the highway to Kwangsi and an important lumber center—with the city of Hengchow on the Siang River, passing through the city of Chiyang.

In the year 1917 work was begun in Changsha on the system of roadways that are to connect the waterfront with the railway connecting the city with Wuchang and Hankow. The railway station is to be built in the northeastern part of the city, and it is to be connected with the Bund by the roadway between the Hunan Yale Hospital and the Yale Mission College. The plan involves a junction of these new roads with the military road between Changsha and Siangtan to the south.

There is not as yet an automobile in the city of Changsha, or, in fact, in the whole Province of Hunan.

POSTAL FACILITIES.

The Chinese postal service in Hunan Province is very satisfactory. Statistics for 1917, the latest available, show that at the end of that year there were in operation 57 head, first, second, and third class offices and substations and 338 agencies. Of these there were 22 offices handling domestic parcels and C. O. D. deliveries; 15 money-order offices of Class A (that is, maximum amount of single money order, $100 Mex.; maximum number of money orders issued to single person on same day, three); 26 money-order offices of Class B (that is, maximum amount of single money order, $50 Mex.; maximum number of money orders issued to single person on same day, two); 18 express delivery offices; 27 steam-served offices; 25 offices exchanging parcels under Union regulations. During the same year, 13,154,100 pieces of mail matter of all kinds were received, and 6,505,900 were despatched. Parcels received numbered 170,400, weighing 659,100 kilos. Parcels despatched numbered 31,600, weighing 68,500 kilos. Money orders were issued to the value of $385,900 United States currency (with exchange at $0.50) and cashed to the value of $397,000. The total mileage covered by the postal lines in the Province is 7,091, classified into 126 separate lines, of which 9 are served by steamers or trains, 33 by fast day and night couriers, 83 by day couriers, and 1 by native Chinese boats. Over one of these courier routes, via Shenchow and Suishan, which traverses the most difficult roads of the Province, is maintained a fast uninterrupted day and night courier connection between Changsha and Chengtu, the capital of Szechwan.

The Japanese maintain the only foreign post office at Changsha. By its service parcels and money may be transmitted to and from the United States.

Parcels are accepted by the Chinese post office for any of the countries in the Postal Union under conditions specified in the International Postal Tariff. Money orders are obtainable only for the transmission of small sums between certain places in China.

It usually takes from 30 to 35 days to receive first-class mail matter at Changsha that has been posted at New York. In order to arrive in this time the mail matter must make excellent connections en route.

TELEGRAPHS.

The telegraph service in the Province is also very satisfactory. Rapid transmission of messages is maintained between Changsha and Hankow. Facilities for sending messages south or west are not so good. Rates are fixed according to whether the message is in the Chinese or a foreign language. On plain Chinese messages the rate charged within the Province is 6 cents Mex. per word; to places in China outside of the Province, 12 cents Mex. is charged. On messages in foreign languages, whether plain or coded, the fixed rate within the Province is 9 cents Mex. per word, and to places in China and outside the Province, 18 cents Mex. is charged per word. Telegrams directed to points in the United States are sent over the Chinese Telegraph Administration lines as far as Shanghai, where they are handed over to the Pacific Cable Co. for transmission via Shanghai-Manila cable to America. The rates are fixed in terms of francs and are subject to variation at the beginning of each quarter with changes in exchange. They also differ for the various cities in the United States. Morse instruments are generally used in the service, but where traffic is heavy and rapid work required automatic Wheatstone instruments are used. All of the principal cities in Hunan are connected with Changsha by telegraph. The service is extended by the Government as required by commercial or political interests.

TELEPHONES.

Changsha is the only city in Hunan that has a telephone service. Seven hundred and fifty instruments are used and an extension of the service is already being undertaken. A charge is made for installing an instrument, after which the monthly rate is $6 Mex. (about $3 United States currency). The system in use in Changsha was purchased from the Western Electric Co. The instruments are "microphone instruments," that is, receiver and mouthpiece are attached to the same handle and held to the ear and mouth in one hand. When the receiver is taken from the instrument, the user is connected automatically with the central exchange, where he is connected in turn with the number that he gives. The telephone administration maintains a wire that connects Changsha with Siangtan, a city about 30 miles south of Changsha. Changteh is reported to be organizing a company for the installation of a telephone service. The Chinese have been quick to appreciate the value of the telephone and are introducing it wherever they can collect capital for the purpose. It is understood that the Government intends to take over the telephone lines of the various Provinces and administer them with the telegraphs.

NEWSPAPERS.

Newspapers are constantly being started and are as constantly disappearing with each political wave. There are two Chinese newspapers at Changsha. One is the Ta Kung Pao, which has a daily circulation of 4,000 to 4,700; the other is the Hunan Kung Pao, with a circulation of about 2,400. No foreign papers are published in the district. Changsha is the only city in the Province having a number of newspapers, while Yochow is understood to be the only other city in the Province that has any newspaper at all. Shanghai papers—namely, the Shen Pao and the Shih Pao and all of the foreign newspapers published in Shanghai—have a circulation in Hunan. Changsha newspapers do not appear to be sold in the streets. New issues are pasted daily on bulletin boards, near the place where they are printed, for the reading street population. The ability to read does not seem to be limited to the wealthy classes. One constantly sees jinrikisha coolies poring over portions of newspapers and small story books. The writer is inclined to estimate the percentage of the population able to read at 30 per cent. The percentage would be higher among the residents of cities than among the residents of the country districts. For ordinary advertising purposes the Chinese newspaper is a safe vehicle, as the Chinese merchant or purchaser of machinery, whom a foreign manufacturer desires to reach, is always able to read and generally takes one or more Chinese newspapers. Advertising rates in the above-named papers are as follows:

Ta Kung Pao.—This newspaper charges a rate of $3 Mex. per English inch (width) per month for half page. This rate is doubled for the space next to the title, and is halved for the space in the center margin where the paper is folded.

Hunan Kung Pao.—This paper charges a rate of $2.50 Mex. for each inch (width) for half page per month. For a full half page a fixed price of $50 Mex. is charged per month. This rate is doubled for the space next to the title and is halved in the case of the space in the center margin where the paper is folded.

There are approximately 4 lines of ordinary Chinese type to the inch. The half page is 9⅜ inches long; 48 characters will make up one line, allowing a total of 192 characters to the inch. A prominent American firm located at Changsha uses 2 inches of space for its advertisement, in which it sets forth an account of its business undertakings and the kinds of products for which it is the agent.

PUBLIC WORKS AND SANITATION.

Irrigation is general throughout the agricultural districts of the Province, large quantities of water being necessary to the cultivation of the principal field crop, which is rice. Irrigation is accomplished by individual enterprise, protected by custom and by the criminal laws of the country. There are no large public irrigation projects. Projects have been talked of for the reclamation of ground along the western borders of the Tung Ting Lake, now subject to annual floods, but little has been done toward the accomplishment of this purpose beyond the maintenance of the ancient dikes that exist along the canals and rivers communicating with the lake. The provincial government has also been considering plans for the dredging and keeping open of a ship channel between Changsha and the Yangtze River, through the lake, throughout the year. Besides the marking of the shifting channel nothing has been done, however, toward the completion of this project.

The cities of the Province, like most of the cities of the country, have no adequate system of drainage, fire protection, or water supply, as such systems are understood in the United States. Most of the cities have ancient sewage systems but have outgrown them, and little effort appears to be made at the present time to cope with the situation and enlarge existing sewers. Changsha, the capital of the Province, is the best-kept city in the district. It has a public-spirited population, which supports an excellent police force. The police commissioner maintains a street-cleaning service, which works very successfully in keeping the well-paved streets in good condition. Water is carried by hand from the river and from wells distributed throughout the city. Both sources are liable to contamination, and it is therefore necessary to boil or distill all water brought to the house. Each house that has a private well is required by the police to put a notice to that effect near its front gate, in order that the well may be accessible for the purpose of fighting fires. Semivoluntary fire companies, reinforced by the city fire company maintained by the police, turn out when an alarm is rung from the bell at the central police station; hand pumps are used to pump the water from the wells to the fire; bucket brigades are also employed. These companies work well and accomplish a great deal, considering the means at their disposal. Disastrous fires occur now and then, but blazes are usually limited to the premises where they originate, as each house is surrounded by a fire wall of brick 30 to 40 feet in height.

Street lighting is accomplished by means of individual oil lamps, displayed by the owners of houses under requirements established by the police. The city of Changsha now has two electric light companies, between which the lighting of the city has been divided. The older company is known as the Hunan Light & Power Co. The current that it furnishes is an alternating current, the voltage from the tension wires to transformers being 2,000. The voltage used in buildings is 220. The new electric light company is known as the Kwang Wha Electric Light & Power Co. It furnishes an alternating current, 3,300 volts from high tension wires to transformers, the voltage used in buildings being 220. The transmission lines are all hung on poles and service is good. The machinery used is German, though additional machinery is to come from American manufacturers. The older company has been slow to extend its service, but with the advent of competition in the shape of another company the prospects are good for a large increase in the amount of current used for various purposes, as opportunities for encouraging the use of individual motors in woodworking shops and machine shops are awaiting an energetic business manager. The price per unit in houses is 13 cents Mex. (about 6½ cents United States currency) per meter unit.

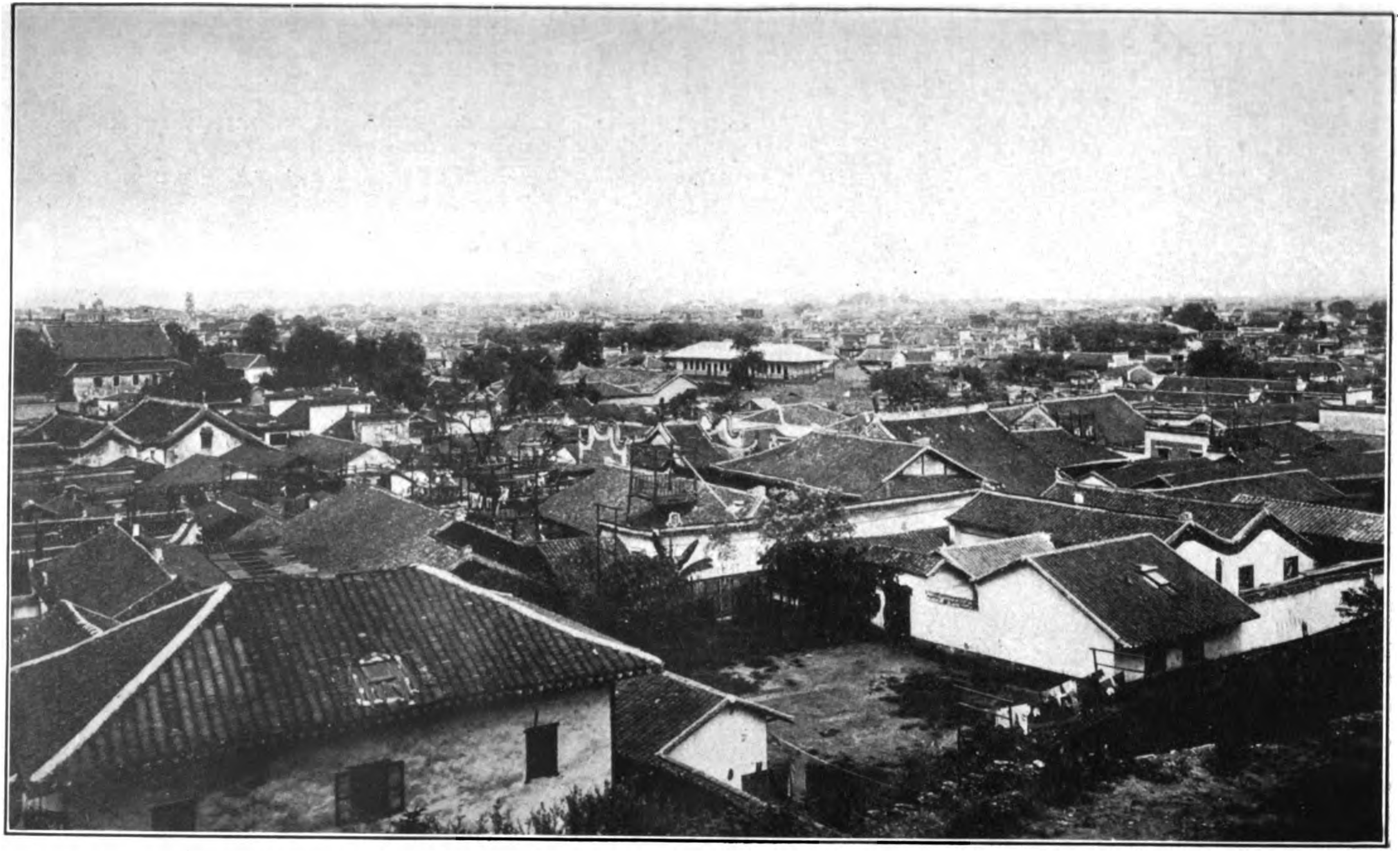

FIG. 35.—VIEW OF CENTRAL DISTRICTS OF CHANGSHA.

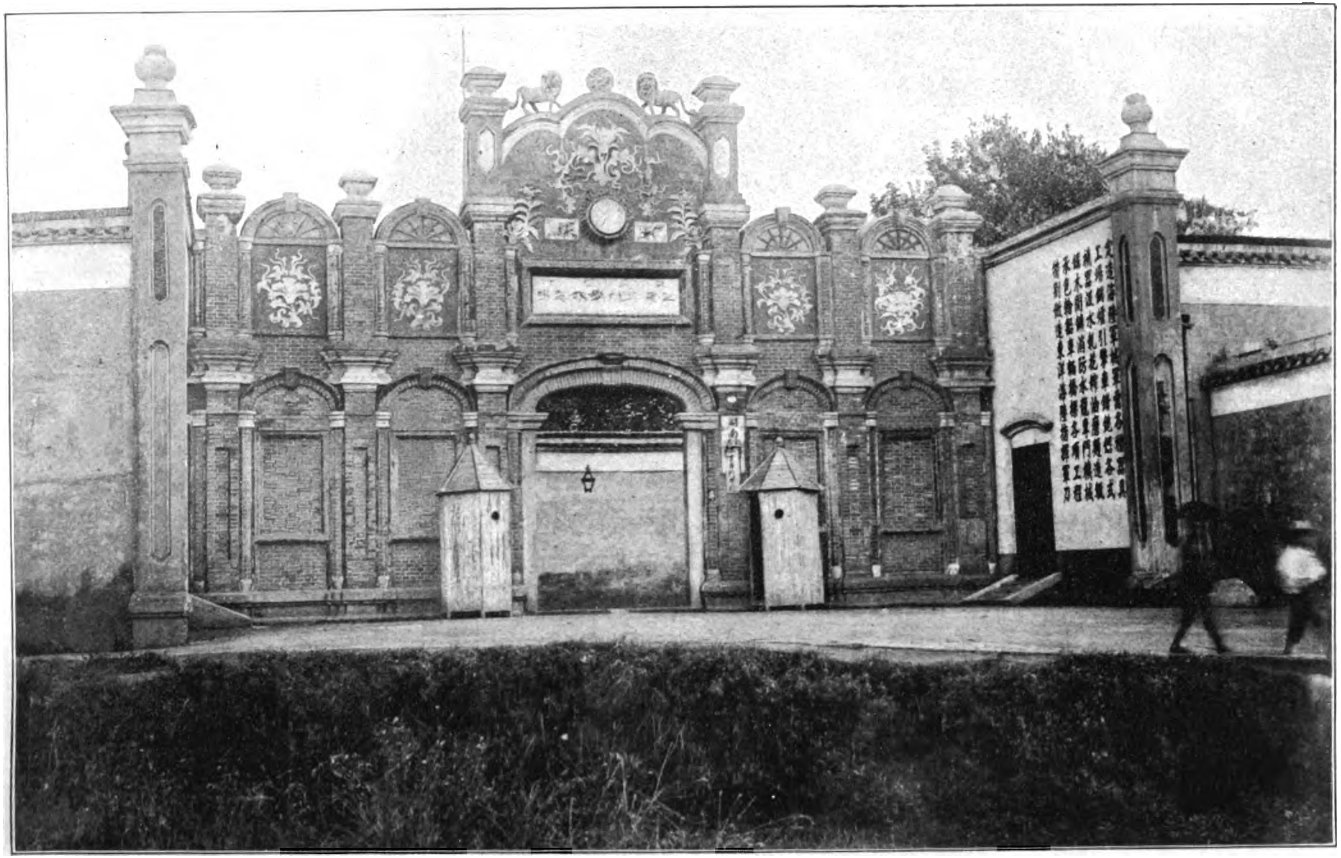

FIG. 36.—ENTRANCE TO MACHINE SHOPS, TECHNICAL SCHOOL OF CHANGSHA.

TREATY PORTS AND FOREIGN CONCESSIONS.

There are two treaty ports in the Province of Hunan, Yochow and Changsha. There has been some talk of the opening of Changteh, but nothing has yet been done toward the realization of this idea. The city of Yochow, with a population of about 20,000, is situated on the narrow passage that connects the Tung Ting Lake with the Yangtze River. The city stands at the gateway to the Province, and its customhouse and likin stations collect toll on the trade that passes into the western trade district of Hunan. Yochow was opened to foreign trade in 1898 by an imperial decree. The city of Yochow itself is built on a bluff with a fine outlook to the west over the lake. Its site does not afford shelter, however, for small vessels, and it was therefore necessary to establish the port and customhouse at Chenglin, some 5 miles north of Yochow and a mile from the Yangtze River. Here a small creek provides the needed shelter for cargo boats and a good anchorage is found for steamers. At Chenglin the Chinese Government has set aside a place for a cosmopolitan settlement, for which they provide roads, police, etc. Yochow has no direct trade with foreign countries. At the present time it serves simply as the customs port for Changteh and western Hunan. The Canton-Hankow Railway will pass through Yochow and may give it an increased importance, especially as a port of transshipment for Changsha during the winter months, when the river is low and water communication between Changsha and the Yangtze is cut off. No consulates have been established at Yochow.

Changsha, the capital city of Hunan, with a population of 229,000, was opened in 1904 to international trade, in accordance with the British commercial treaty of 1902 and the Japanese commercial treaty of 1903. Article 10 of the latter treaty provides as follows:

> The Chinese Government agrees to open to foreign trade, within six months from the exchange of the ratifications of this treaty, Changshafu in the Province of Hunan, on the same footing as the ports already opened to trade. Foreigners residing in this open port are to observe the municipal and police regulations on the same footing as Chinese residents, and they are not to be entitled to establish a municipality and police of their own withing the limits of this treaty port, except with the consent of the Chinese authorities.

The Chinese authorities laid out a site for a proposed cosmopolitan commercial port (Chinese interpretation of the term "treaty port") just outside of the north wall of the city. Regulations were drawn up in conjunction with a representative of the Japanese Government providing for the boundaries of the new settlement, fixing the lease rates on property, municipal tax rates, and imposing a tax on imports for the defrayal of the cost of erecting bunds and making road improvements. These regulations have not received the approval of the diplomatic body at Peking, and are therefore not considered enforceable as regards foreign residents. The settlement site as set apart by the Chinese Government is unsuitable, chiefly because it is not near a part of the river where vessels can find proper anchorage. Foreign shipping companies have placed their jetties and hulks along the bund outside the west wall of the city, where plenty of water has been found for a ship's anchorage. Houses for the customs staff, the postal officials, the British consulate, and the managers of the Standard Oil Co. and Asiatic Petroleum Co. have been erected on a long, narrow island in the river that parallels the west wall of the city.

The Japanese consulate is located on the waterfront of the site above referred to as having been laid out as a cosmopolitan settlement. The American consulate is located in a leased foreign house on the waterfront outside the Fu Hsing Gate of the city.

The Chinese authorities have endeavored to put every obstruction possible in the way of ownership and leasing of land by foreigners in and around the treaty ports of Changsha and Yochow. They have endeavored to limit such residence to the site of the so-called International Settlement, and regulations for the settlement limit the period of a lease to 30 years, with privilege of renewal for a similar period. All of these questions, however, remain open and are still occupying the attention of the diplomatic body at Peking in its discussions with the central Chinese Government.

FINANCE AND BANKING.

The square-holed copper coin known as "cash" is, to all intents and purposes, still the unit of exchange used throughout the Province in transactions of all kinds. Though the "cash" themselves are not often seen, their place has been taken by the copper pieces representing 10 cash each. A paper note currency has been issued by the various banks, with the exception of the two Government banks (the Bank of China and the Bank of Communications), based on this copper 10-cash currency. These notes run from 10 cents (100 cash) to 100 cents (1,000 cash or 1 "tiao" or "string" of cash). There is a provincial tael or ounce of silver which is the unit of value used in large commercial transactions. The depreciation of this tael as compared with the Hankow tael is graphically shown by the fact that prior to 1911 98 Changsha taels equaled 100 Hankow taels, while on July 18, 1916, 235 Changsha taels equaled 100 Hankow taels.

While the last rate just given is doubtless somewhat abnormal, it is nevertheless a fact that the Changsha tael has depreciated steadily in value since 1911 because of the overissuance of note currency and because of lack of confidence among the merchants and gentry. The result has been that foreign firms doing business in Hunan quote their prices in Hankow taels, and send all surplus money received to Hankow for deposit. The dollar currency is divided into "clean" and "chopped." The "clean" dollar is an unchopped Mexican dollar—that is, one that has not been defaced by the process known as "chopping." "Chopping" a dollar consists in impressing upon the surface of the coin a mark or "chop" from a hard metal die. A dollar soon becomes so "saucered" by the process that it will no longer stack. Of course, such dollars are discounted, a fact that tends to limit their circulation to a single city or district. The use of "clean" dollars is being encouraged by the branches of the Bank of China and Bank of Communications that have been established in Changsha. Subsidiary 10 and 20 cent silver coins are not received with favor in Changsha or in the northern parts of the Province. They come into the southern part of the Province from Kwangtung and Kwangsi and are used almost universally to the exclusion of other kinds of coins as far north as Hengchow in southern Hunan. Hengchow merchants collect them and ship them to Shanghai under favorable exchange conditions, converting them into credit in the Shanghai banks, against which supplies of foreign piece goods, etc., are purchased.

Foreign import houses that are established in Hunan are all branches of Shanghai and Hankow houses and do their business through Hankow and Shanghai, quoting their prices in Hankow taels. Prior to the opening of the port of Changsha to trade, the Chinese banks monopolized commercial transactions with Hankow and Shanghai. The opening of the port of Changsha and the appearance of import and export houses brought about the gradual elimination of the Chinese banks from this business. The depreciation of the Hunan tael currency has caused that unit of exchange to be absolutely discredited as a medium of purchase.

The principal Chinese banks are the Bank of China and the Bank of Communications, both Government institutions, and the Bank of Hunan, a provincial institution. These banks all do a general banking business, receiving money for deposit, issuing bank notes, and making loans on real estate, or, in the case of the Bank of Hunan, on rice and other crops. The Bank of China pays on current tael accounts interest at the rate of 2 per cent; on dollar deposits of three months' duration, 2½ per cent; six months, 3 to 3½ per cent; and on dollar deposits for a year, 4½ to 5 per cent. Eight per cent is charged on overdrafts. The bank will make short-time loans up to 60 per cent of the value of the real estate offered as security, charging interest at the rate of 7½ per cent. The Bank of Hunan pays no interest on current accounts; on dollar deposits of taels it pays 4 per cent on deposits for 3 months, 5 per cent on 6 months' deposits, and 5½ per cent on deposits of one year. The bank of Hunan charges interest at the rate of 6 per cent on overdrafts. It will make a short-time loan on real estate up to 60 per cent of the value of the property offered as security, charging 8 to 9 per cent interest. Similar rates are charged on loans secured by crops.

The Yü Hsiang Bank, opened during 1918, has acted as the fiscal agent of the provincial government and has issued both silver and cash notes redeemable at par.

Chinese banks are of ancient standing. They furnish the paper currency that is used by the people and enable them to remit sums of money safely from one trade center to another.

On May 1, 1917, a branch office was opened in Changsha by the China-Japan Bank (Ltd.), a Japanese banking institution reported to be capitalized jointly by Chinese and Japanese funds and backed by the Japanese Bank of Taiwan. This is the first foreign bank to be located at Changsha and is the only one offering to sell foreign exchange.

The Chinese would welcome the establishment of an American bank at Changsha, especially one authorized to issue its own notes, as they believe it would help materially toward stabilizing the local currency. Such a bank should soon have a thriving business of remittances and deposits. The Chinese claim that there is plenty of money at Changsha but that it has been hoarded on account of disturbed conditions. Foreign business men would also welcome the establishment of an American bank having facilities for handling remittances and foreign exchange. Recognizing the situation, the Asia Banking Corporation has announced its intention of opening a branch in Changsha in October, 1919. The International Banking Corporation also has in contemplation the establishment of a branch there.

MANUFACTURING AND OTHER INDUSTRIES.

Hunan's principal industries are those of ore smelting, and it is in these industries that the greatest progress has been made in the introduction of modern methods and machinery. The vegetable-oil, dye, firecracker, clothing, and other industries continue to remain home industries.

INDUSTRIES CONNECTED WITH MINING.

Reference has already been made to the Shuikoshan lead and zinc mines. With the exception of these mines and two or three recently opened mines for which modern mining machinery has been ordered, the mines of the Province are practically all worked with the primitive methods that have been used without material alteration for centuries past. A Chinese mine has been described as a "ragged hole in the ground off which numerous irregular-shaped excavations have been made, following the ore and working it out wherever it is found in sufficient quantities." Development work is rarely or never undertaken, so that reserves of ore, for the tiding over of a period when poor ore zones are met, are never made. Practically all of the work is done under contract, whether mining, hoisting, dumping, or ore treatment. The method of working and the control and direction of operations is generally left entirely to the workmen. The mining is let to one or more underground contractors and is paid for according to the quantity of picked ore delivered. The contractor engages the miners and provides the necessary tools and explosives. Chinese black powder is used in blasting. The fuse is of straw and touch paper filled with powder. Flare lamps, made of an iron saucer suspended at the end of an iron rod with wick immersed in vegetable oil, are used for light. Mr. A. S. Wheeler (cf. Far Eastern Review, September, 1915, "Metalliferous Mines of Hunan Province") gives the following description of the pumps used:

> The pumps used are quite ingenious. They are made of bamboos 5 inches in diameter from which the inside rings have been cut out, thus forming the pump barrel. The rod is a long strip of bamboo, to the end of which is fixed a disk of hide of the same diameter as the bore of the bamboo. This acts as a flap valve and is seated or supported on a smaller disk of wood. A crosspiece fixed to the other end of the strip serves as a handle. The pump coolie actuates the plunger, and the discharge end of the bamboo delivers the water into a small cistern or sump, on which he sits. The suction of a similar pump above him draws from this cistern and raises the water to the one next above, and so on. The method is crude, but it answers admirably for comparatively shallow workings, as labor is cheap and the capital outlay is a minimum.

The miner in his work underground breaks off the ore and eliminates the waste rock before the ore is dragged out of the mine in basket loads weighing eighty-odd pounds each. Further waste rock is then detached from the ore by hammering, and the ore is sorted before it is put into the smelters.

The smelting of antimony is the chief of Hunan's mining industries. Crude antimony, or concentrated antimony sulphide, is manufactured by the Chinese by a process of smelting. The ore in small lumps or dust is heated in a clay pot. The sulphide fuses easily and melts, percolating through a hole into a lower earthenware pot, whence it is ladled into molds. Crude antimony manufactured by this method contains about 70 per cent antimony. The residuum or "antimony ash" left after liquation contains sometimes as much as 30 per cent of antimony. This was formerly considered as so much waste, but the high prices commanded by antimony during recent years encouraged the smelters to roast out this waste for its antimony content.

The Hua Chang Mining & Smelting Co., a Chinese company operating a number of mines for different metals, acquired in 1908 the French patent rights in China of the Herrenschmidt furnace used in the manufacture of antimony regulus or refined antimony. The plant was installed in their works in that year, under the supervision of two French engineers, with a capacity of a ton of antimony regulus per day. The process consists briefly in mixing the broken antimony ore with charcoal and heating with regulated admission of air. This converts the sulphide into oxide, which is volatile and is drawn off and condensed in special chambers. The oxide is then mixed with suitable fluxes and smelted in the ordinary reverberatory furnaces. Chinese regulus runs over 99.5 per cent of metal. The Hua Chang Co. has increased the capacity of its plant at Changsha to 20 tons per day, with local materials and workmen.

Mr. Wheeler describes as follows the Chinese methods of extracting tin:

> The dressing of the ore consists of cobbing and sorting, the clean arsenical ore being stacked for separate treatment. The remainder is then roasted, the arsenious oxide (the "arsenical soot" of commerce) being collected by condensation in dome-shaped chambers built of rough stone and plastering, with clay inside. This soot is placed in thin iron basins over a fire, covered with similar basins inverted, and subjected to a prolonged second heating, when the arsenious oxide is deposited as a "glass" on the upper basin. It is sold in this form for agricultural purposes. The roasted ore is then crushed by water-driven Chinese stamps, after which it undergoes a series of concentrations.
>
> The first of these is effected by raking the ore over from side to side into a shallow stone-paved pit in which water is flowing. The "heads" from this operation are further concentrated by repeated washings down a concave-shaped incline. The concentrates are then mixed with loam and reroasted to drive off the associated arsenic, after which they undergo a second crushing and concentration as above described. The smelting is conducted in a cylindrical furnace built of brick or stone, bound with clay. The blast is supplied by a double-acting Chinese bellows through a 2-inch opening, pointed downward from the back of the furnace. The furnace door is stopped with clay and a layer of live charcoal is placed on the furnace bottom and blown up to a good heat. About 50 catties (approximately 67 pounds) of concentrate mixed to a thick paste with "incense wood" pulp is then charged in and covered with a layer of charcoal. The smelt lasts for 24 hours, charge and fuel being added half-hourly, and the blast continued throughout. Shortly after starting an iron rod is inserted in the furnace door, and through this tap hole the molten tin trickles out slowly into a clay-lined depression, where it is kept covered with live charcoal. When sufficient has collected it is ladled into sand molds, forming ingots of about 45 catties weight (approximately 60 pounds) each. The metal thus obtained runs over 99 per cent tin.

Quicksilver is produced in the western part of the Province from mercuric sulphide or cinnabar. The cinnabar product of the richer ore is sold as cinnabar and is understood to be used as a pigment. The poorer ore and tailings left from panning the richer ore are retorted for their quicksilver content. Concerning this process Mr. Wheeler says:

> The retort used consists of a thin iron basin 30 inches in diameter supported on stonework at a height of about 8 inches above the ground level. Two other basins, from which the bottoms have been burned out, leaving only deep rims, are fitted in reverse positions into each other and placed on the lower basin. The uppermost is

then covered with a thin iron plate, leaving a circular opening of about 12 inches, and on this is placed an earthenware pot upside down. The ore, previously crushed, is charged into the lowest basin, and all joints are luted with clay. A semicircular channel of clay is molded around the inner periphery of the top basin and communicates with the interior of the retort by means of three holes. A wood fire is lit and heats the ore. The cinnabar dissociates into mercury and sulphur dioxide; the fumes of the former rise up and partly condense on the interior of the earthenware pot and partly pass via the communication holes into the semicircular channel. The latter is thus a collecting ring, the contents of which go to the company as their share to defray cost of furnace, basins, pots, etc. The amount so collected is stated to vary from 12½ to 15 per cent of the total distillate, but this is rarely if ever checked by actual weighings or tests.

The miners will not permit the ring and holes to exceed certain dimensions, which, however, vary widely at the two mines. It is certain that such factors as grade of ore and heat applied would materialy affect the percentage passing into and condensing in the collecting rings. The condensing pot is removed by hand when too hot (this is ascertained by spitting on it as clothes ironers try the heat of an iron) and a fresh pot substituted. Despite the total lack of precautions in conducting the retorting operations and the leakage of the retorts, very few cases of salivation were noticed. It was stated that furnace men were fully alive to the danger of this work and do not keep at it for more than three or four years.

Sulphur is secured by the distillation of iron pyrites. The lump ore is placed in long cylindrical clay crucibles covered with moist clay and supported in an inverted position over shallow pots standing in running water. The crucibles, 80 or more to the furnace, are packed around with coal cake, which is allowed to burn for 24 hours. The clay covering dries and cracks, permitting the escape of molten sulphur, which trickles into pots cooled by the running water.

MANUFACTURE OF VEGETABLE OILS.

Perhaps next in importance to the mining industry comes the industry that is concerned with the manufacture of vegetable oils. The same method is used with slight variations throughout this industry. The oil-bearing seeds are dried and then crushed in a mill consisting of a circular trench in which a stone wheel travels, pulled around by a water buffalo or ox. The seed meal thus produced is then steamed. An iron ring about a foot in diameter is laid upon the floor and upon it is laid a kind of container made of a bunch of coir fiber tied tightly at one end, leaving the loose ends flaring out and extending beyond the circumference of the iron ring. Upon this container a weighed measure of the steaming seed meal is placed, the ends of the fiber are folded over, and the whole is pressed down with the feet so that it completely fills the iron ring. Another iron ring is placed on the top of the completed cake of hot meal, and the same process is followed until one has a pile of iron-ringed cakes about 4 feet high or sometimes less. The pile of cakes is then placed in a press made of a hollowed tree, wedges are inserted at one end, and the process of expressing the oil begins. The iron rings serve as an elastic wall for the meal cakes, the spaces between them growing less and less with added pressure. The oil runs out of an orifice in the bottom of the hollow tree press and collects in a jar buried in the ground, whence it is ladled out into containers and is ready for the market.

PREPARATION OF TEA.

Green and black, or "red," teas are produced in large quantities throughout the Province, the districts of Hsinhua and Anhua in the central part being, however, the most important tea-producing centers. These teas are produced from the same plant. The difference in color is due to different processes of manufacture. The green teas are the result of firing in copper roasting pans, while black tea is produced by a process of fermentation, the leaves being exposed to the open air. The green tea retains far more of the oil and sap peculiar to the leaves. The black teas undergo a partial fermentation as they lie in heaps after the first roasting. The black tea leaves become oxidized by the longer contact in a moist state with the atmosphere.

MISCELLANEOUS INDUSTRIES.

The manufacture of nankeens or native cotton goods is still a home industry, wooden Japanese and Chinese made hand looms being used in the houses.

Modern methods are reported to have been introduced into the brick industry, for which there are kilns and great drying sheds along the river south of Changsha. A plant located 10 miles south of Changsha, on the left bank of the river, is equipped with machinery for the manufacture of bricks and pressed roof tiles. The products are fine-grained, firm, red bricks (the Chinese-made brick has generally a dull bluish-gray color) and tiles of foreign pattern, with interlocking edges.

A Chinese company owns and operates a flour mill equipped with the latest American roller-mill machinery and is doing an increasingly prosperous business.

Matches are made in a modern factory near Changsha and are equal in all respects to imported Japanese safety matches. The sticks for the matches, as well as the match boxes, are imported from Japan.

The cloth-dyeing industry is a vigorous one. Crude prints in blue and white are made in the following manner: The cloth is laid on long tables and a stenciled design cut in oiled cardboard or leather is laid upon it. A thin coating of lime wash is then spread over the stencil and after drying the stencils are removed, leaving a figured design in white lime on the cloth. The cloth and lime design are then painted with indigo, and the painted cloth is spread out in the sunlight, where it is thoroughly dried. The final process consists of scraping the dried lime from the cloth, which leaves the white design on the blue background. The results are similar to those in the so-called Japanese toweling designs.

The firecracker industry employs large numbers of people. It is still a home industry. The machinery used is very crude but appears to answer the purpose well. The small paper tube is rolled between concentrically curved blocks of wood, the upper swinging as a pendulum above the lower, which is fixed. Fuses are inserted by children and the completed red crackers are then plaited together by hand and folded into packages of various sizes.

The glass factory at Changsha has excellent supplies of sand for its use and has taken up the production of additional lines. Previously it made only fancy glassware and glass tiling, but it has undertaken the importation of modern machinery for the manufacture of lamp chimneys and bottles.

COMMERCE OF THE PORT—INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Changsha during the years 1905, 1913, and 1918.

Imports and exports.	1905	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$139,889	$1,087,961	$2,420,562
From Chinese ports	2,203,643	8,274,149	8,207,640
Total foreign imports	2,343,532	9,362,110	10,628,202
Reexports of foreign goods:			
To foreign countries and Hongkong	5	....	....
To Chinese ports	8,362	34,055	377,249
Total foreign reexports	8,367	34,055	377,249
Net total foreign imports	2,335,165	9,328,055	10,250,953
Imports of Chinese products	450,431	1,624,773	4,451,291
Reexports of Chinese products:			
To foreign countries and Hongkong	....	....	....
To Chinese ports	3,251	2,655	113,163
Total Chinese reexports	3,251	2,655	113,163
Net total Chinese imports	447,180	1,622,118	4,341,128
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	156	783	1,489
To Chinese ports	1,055,684	6,364,471	12,811,863
Total exports of local origin	1,055,840	6,365,254	12,813,352
Gross value of the trade of the port	3,849,803	17,352,137	27,895,845
Net value of the trade of the port	3,838,185	17,315,427	27,405,433

EXPORT TRADE.

Hunan Province is well situated for exporting its raw products, as has appeared from the discussion of its physical features and its communications. From this discussion it became apparent that nearly every part of the Province is accessible to the main waterways which connect the Province with the Yangtze River, making it possible to collect raw products, such as ore, hides, vegetable oils, etc., with little or no difficulty and by the inexpensive means of boats. The open ports of Changsha and Yochow have developed very slowly as independent export centers. This is due to their geographical proximity to the great collecting and distributing center of Hankow, located at the head of the deep-water navigation on the Yangtze River.

Hankow has been the collecting and distributing center for this part of interior China for such a long time that it will be extremely difficult to change well-established trade channels. It is the practice of Hankow and Shanghai exporters to send Chinese purchasing agents to places like Changsha, Siangtan, and Changteh to collect and buy for them the raw products that they export. Such products are generally re-sorted, refined, or at least repacked in Hankow or Shanghai before they are finally shipped. This is particularly true of hides, raw cotton, wood and other vegetable oils, and bristles. A table follows showing the principal goods exported from Changsha (excluding reexports) during the years 1905 (the year following the opening of Changsha to foreign trade), 1913, and 1918:

Articles.	1905		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Arsenic . . . . pounds			506,733	$37,134	228,480	$31,884
Bamboo shoots . . . . do			259,467	43,548	371,840	101,931
Beans:						
Green . . . . do	396,133	$5,702	1,808,533	20,893		
White and yellow . . . . do			238,933	2,904		
Broad and other kinds . . . . pounds			47,492,933	689,063	183,680	5,438
Bristles . . . . do	64,000	19,770	117,333	31,253	284,480	290,992
Cereals:						
Rice and paddy . . . . . . do			41,961,600	519,211		
Wheat . . . . do			1,910,667	29,290		34,589
Coal, Pinghsiang . . . . tons	756	3,146	257,924	1,176,778	69,090	720,389
Coke . . . . do			157,306	872,733	150,050	2,733,478
Cotton goods: Nankeens . . . . pounds	172,133	40,773	8,933	3,219	4,267	2,495
Eggs, preserved and fresh . . . . number	270,615	1,544	33,339	166	3,000	24
Feathers, duck, fowl, etc. . . . . pounds	44,667	3,251	125,333	7,769	69,440	8,241
Fibers:						
Coir . . . . do			420,133	15,135	360,640	38,644
Hemp . . . . do	1,153,733	64,438	3,782,667	186,183	94,080	9,438
Firecrackers and fireworks . . . . pounds	2,174,267	89,524	8,273,600	560,785	7,141,120	1,964,236
Grass cloth, all kinds . . . . . do	155,600	43,529	187,733	177,665	647,360	1,157,358
Hair, human . . . . do		1,947	308,800	108,542	147,840	36,738
Hides, buffalo and cow . . do	411,733	47,001	1,262,267	152,726	647,360	127,832
Lard . . . . do	577,600	29,438	22,667	1,782	4,480	505
Medicines		6,644		20,823		76,801
Metals:						
Antimony—						
Regulus and crude . . . . pounds	7,734,933	112,027	20,204,800	465,068	35,304,640	2,607,738
Ore . . . . do			9,338,533	100,283	716,800	17,147
Lead ore . . . . do			7,945,333	129,466	3,902,080	117,400
Steel bars . . . . do			152,933	(1)	387,520	60,626
Tin in slabs . . . . do			396,000	72,952	91,840	54,138
Zinc ore . . . . do			21,846,667	106,795	4,480	43
Oils:						
All kinds . . . . do	54,400	2,411				
Tea oil . . . . do			35,733	2,170	280,000	27,729
Wood oil . . . . do			2,191,867	126,728	20,160	1,809
Paper:						
First quality . . . . do	160,133	4,607	33,600	5,692	116,480	16,587
Second quality . . . . . . do			5,348,933	233,112	5,120,640	463,710
Potash . . . . do			309,600	8,622	2,240	100
Seeds:						
Lily flower or lotus . . do			740,267	98,332	351,680	76,550
Sesame . . . . do			1,043,867	31,607		
Tea:						
Black . . . . do			2,667	414	1,733	190
Leaf, unfired . . . . do	6,533	818	106,800	9,421	56,133	3,212
Stalk . . . . do					91,600	3,071
Tobacco, leaf and stalk . . do	46,667	1,832	171,733	11,792	253,120	34,771
Umbrellas, paper . . . . . number			73,780	7,250	7,000	2,747
All other articles		577,438		297,948		1,984,771
Total exports of local origin		1,055,840		6,365,254		12,813,352

[1] Figures for value not available.

Most of the articles mentioned in the above table have been described in the earlier pages of this chapter on Hunan. As stated, the collection of articles is carried on by brokers and buyers sent into the country to purchase a hide here, a picul of rice there, and a basket of vegetable oil yonder, gradually increasing their stock until the quantity wanted is obtained. The demand for such products has brought about the usual temptation to adulterate, and it is for this reason that it has been necessary to establish factories and warehouses at Changsha and particularly at Hankow, for the purpose of re-sorting, refining, and repacking such raw products. As stated, the trade in raw products in Hunan is controlled by the Hankow merchants, who sell to the foreign buyers. This is particularly true of tea, which has its own special fleet of junks.

The greatest direct activity on the part of foreign buyers of Hunan's raw products is found among those purchasing the output of the mines of the Province. A number of Europeans and Japanese have established themselves at Changsha and have erected smelters for the purpose of collecting and refining ore of various kinds for export. The customs returns throw no light on the proportion of Hunan products destined for foreign countries, local merchants declaring them simply for Hankow or Shanghai as the case may be. The commissioner of customs in his Decennial Report (1902–1911) states, however, that, roughly speaking, the antimony goes to Belgium, France, and England—to which should now be added the United States—wood oil to the United States and Germany, and beans (mostly broad beans for fodder) to England and Italy.

The following table shows the articles invoiced at the Changsha consulate for exportation to the United States during the calendar years 1917 and 1918:

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
Antimony:				
Crude...long tons..	250	$24,988	....	....
Regulus...do....	3,292	671,716	1,300	$255,364
White oxides...do....	90	9,779	100	15,207
Curios, miscellaneous...	....	1,140	....	....
Household goods...	....	....	....	460
Tea, Chinese black...tons..	42	27,501	....	....
Tin, pig...long tons..	15	11,240	....	....
Tungsten (concentrates)...do....	182	149,078	198	184,695
Total...	....	895,442	....	455,726

IMPORT TRADE.

The value of imports of foreign goods into Hunan has grown steadily with exports since the opening of Hunan to foreign trade. Hardly a town in the Province but has foreign-made products of some kind or other displayed for sale in its shop windows. Changsha is becoming more and more a provincial distributing center for foreign imported products. This trade is likewise controlled generally by the Chinese merchants, except in the case of kerosene oil and sewing machines. Transportation facilities between the Province and the trade marts on the Yangtze River have changed very little during the years under review. The Province has no direct communication with foreign countries by steamer. The completion of the railway between Hankow and Changsha will mean steady traffic between the two cities, whereas in the past water-borne traffic has been interrupted (so far as steamer communication is concerned) during the three winter months of each year by low-water conditions. The general attitude toward foreign-made goods is a tolerant one, tempered by a desire to manufacture various foreign articles locally when possible. This is being done now on a small scale, but the output of the factories making articles fashioned after foreign models is sure to increase steadily in the future. Cost of production and quality of goods will determine whether these locally made products can seriously compete with the foreign imported article. The workshops of the Government mechanical engineering school are turning out modern officers' swords, bayonets, steam boilers capable of producing 30 horsepower (Lancashire type), steam pumps, smelting furnaces, files, steam engines, etc. Likewise a hardware manufacturer trained in the machine shops of Shanghai's shipbuilding works has installed a large machine shop on the river front at Changsha where he manufactures propellers and shafting, and turns out, to order, all kinds of castings of moderate size, smelting furnaces, screws, etc. There is a factory in the city capable of turning out 300 foreign-style umbrellas per day. The umbrellas are somewhat crudely made, with wooden sticks and cotton covers, but they are cheap and they find a ready market among the poorer classes of Chinese. There is another factory in the city that makes felt hats of the style known as the derby, and sun helmets that are excellent models of the well-known pith sun helmet produced in India. A flour mill has been installed in the north suburb of the city and is working night and day turning the wheat grown in the Province into flour for sale to the Hunanese.

The Hua Chang Smelting and Mining Works installed its smelter for the production of antimony regulus in 1908, and its success has been so phenomenal that the tendency is to do the smelting of metals at Changsha and export the refined product rather than the ore.

In spite of these facts, however, imports continue to grow steadily. With Changsha as a distributing center, goods can be taken to any part of the Province over its many interlacing waterways; but the shipper should not forget that this transportation is by small vessels or by porters and that transshipments will be frequent, both between the place of production and Changsha and between Changsha and the ultimate destination. Therefore goods should be securely packed in small, water-proof packages. Machinery should be taken apart and the parts shipped separately, for it has been found almost impossible to transport large, heavy machinery through a country of paddy fields and no roads. There follows a table giving a list of foreign goods imported (net imports) at the port of Changsha during the three years 1905, 1913, and 1918:

Articles.	1905		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Bags, all kinds.........pieces..	320,450	$27,503	1,081,198	$114,018	48,750	$8,104
Betel nuts............pounds..	101,933	2,528	92,267	2,374	338,240	14,639
Bêche de mer, all kinds..do....	94,400	15,790	142,667	21,309	105,280	29,860
Buttons, all kinds.......gross..	19,919	4,363	17,061	4,911	12,088	5,901
Cigarettes..........thousands..	....	8,546	30,009	47,555	123,496	390,585
Clocks and watches ..number..	3,129	4,178	21,335	20,383	4,095	7,833
Dyes, colors, and paints:						
Aniline....................	....	9,754	....	108,060	....	13,586
Indigo, artificial..pounds..	....	....	2,271,200	349,533	....	....
Electrical materials and fittings.	....	....	....	32,462	....	62,876
Flour.................pounds..	110,000	2,470	62,800	1,353	....	977
Glass, window.........boxes..	3,608	9,613	11,057	28,515	8,559	88,423
Lamps and lampware............	....	10,787	....	50,071	....	12,701
Machinery.....................	....	7,111	....	247,811	....	14,334
Matches, wood, Japan...gross..	25,600	4,154	48,150	8,136	23,709	12,727
Metals:						
Copper ingots and slabs ....pounds..	3,855,200	619,496	3,325,783	551,485	7,949,760	2,489,266

Articles.	1905		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metals—Continued.						
Iron and mild steel, new—						
All kinds.....pounds..	203,067	$3,799				
Bars and nail rod.do...	9,067	1,302	1,233,600	$20,726	226,240	$16,189
Nails, wire, and rivets ....pounds..			618,933	14,772	403,200	31,966
Rails............do....			7,364,133	120,955	2,387,840	139,249
Sheets and plates.do....			205,067	3,874	67,200	7,898
Iron, galvanized: Sheets ....pounds..	33,200	1,032	536,133	19,405	35,840	5,151
Lead, in pigs and bars.do...	185,600	5,284	918,400	35,751	266,560	24,668
Spelter.............do....	164,533	8,288			133	16
Tin, in slabs.........do....	46,133	10,861	26,000	6,180	8,960	4,853
Needles...........thousands..	33,145	4,622	187,130	27,321	64,293	70,949
Oils:						
Engine..American gallons..			59,091	13,087	63,235	26,256
Kerosene—						
American........do....			6,453,158	530,183	208,000	64,517
Borneo..........do....			1,636,130	179,157	1,030,000	288,766
Sumatra.........do....			139,670	15,294	1,127,200	336,486
Pepper:						
All kinds.........pounds..	181,200	21,754				
Black................do....			443,200	42,978	309,120	56,607
White................do....			61,867	9,321	62,720	14,144
Piece goods, yarns, and thread:						
Shirtings, gray, plain—						
American and English ....pieces..	104,043	195,971				
American ....do....			5,440	13,668	640	5,468
English..........do....			203,269	465,516	40,765	231,833
Japanese.........do....					83,069	186,461
Sheetings, gray, plain—						
American and English ....pieces..	18,150	40,193				
American ....do....			36,540	85,468	840	4,312
English..........do....			7,520	20,244	50	378
Shirtings, white, plain ....pieces....	99,976	271,724	300,140	916,094	88,463	613,987
White irishes ....do....			818	3,087		
Drills—						
American........do....	13,245	32,616	3,740	10,958		
English..........do....			5,811	16,459	2,844	33,056
Japanese.........do....			45,795	125,845	11,083	61,152
Jeans—						
American and English...........pieces..	1,800	3,873				
American........do....			160	504	440	2,085
Dutch............do....			1,080	2,417		
English..........do....			119,485	269,759	8,522	51,288
Japanese.........do....					40,529	206,925
T-cloths.............do....	280	490	470	754	100	525
Printed chintzes, plain prints, and printed shirtings..........pieces..	8,157	13,217	7,115	13,074	5,113	24,826
Cotton italians—						
Plain, fast black.do....	78,544	261,731	62,037	209,678	11,410	92,426
Colored..........do....			41,388	109,976	5,562	36,513
Figured..........do....			25,747	78,564	420	2,856
Cotton venetians—						
Plain, fast black.do....			7,443	41,348	2,010	25,010
Colored..........do....			11,320	66,605	14,196	112,233
Figured..........do....			1,961	13,328	242	2,676
Cotton lastings—						
Plain, fast black.do...			819	2,499	960	6,483
Figured..........do....			7,732	17,384	1,875	16,700
Dyed shirtings and sheetings, plain........pieces..	2,446	7,231	1,041	3,085	188	1,384
Dyed cambrics, lawns, and muslins..........pieces..	1,166	985	29,437	35,247	1,400	9,644
Turkey-red cambrics and shirtings.........pieces..	9,186	14,186	17,267	24,987	10,011	48,764
Cotton Spanish stripes, pieces......................	1,784	4,993	2,024	5,984	75	617
Cotton flannels.....pieces..	6,503	17,300	45,987	133,882	3,134	17,594
Velvets and velveteens, yards......................	87,279	14,746	322,957	68,452	42,111	20,095
Cotton blankets....pieces..	4,859	1,448	30,149	9,844	14,171	17,413
Handkerchiefs......dozen..	5,592	1,397	22,081	4,514	18,358	12,747
Towels..............do....	7,083	2,611	420	107	21,904	20,790

Articles.	1905		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Piece goods, yarns, and thread—Continued.						
Cotton yarns—						
English......pounds..	591,200	$84,617	33,200	$7,449		
Indian..........do....			28.000	4,196	8,900	$2,800
Japanese.........do....			7,952,933	1,085,505	2,701,440	1,151,021
Cotton thread, in balls, pounds................			38,667	17,854	6,133	5,479
Woolen and cotton mixtures—						
Union and poncho cloths.........yards..	9,145	3,005	172,967	61,870		
Union Italian cloth, plain and figured, pieces................	660	4,553				222
Woolen goods—						
Camlets, English, pieces................	750	6,899	1,826	18,408	56	1,245
Cloth, broad, medium, habit, and Russian, yards................	29,258	31,143	67,211	70,162	233	296
Lastings, plain and figured.......pieces..	500	3,741	988	8,821		
Long ells.........do....	441	1,754	410	1,778	2	25
Spanish stripes..yards.	13,956	7,772	21,149	8,491		
Foreign miscellaneous piece goods: Canvas and cotton duck.........yards..			35,407	6,615	11,800	3,967
Sandal wood..........pounds..	668,400	33,667	1,200,400	64,214	165,760	22,319
Seaweed................do....	2,346,267	32,186	5,457,067	75,815	3,682,560	84,538
Soda...................do....			1,063,067	12,113	2,625,120	140,281
Sugar:						
Brown...............do....	688,267	15,073	2,997,600	66,305	2,365,440	87,199
White...............do....	1,793,867	50,090	3,730,267	104,365	650,560	38,527
Refined.............do....	3.179.867	95,753	16,238,267	494,312	11,054,400	852,595
Candy...............do....	622,800	25,062	1,550,533	56,199	837,700	66,359
Timber:						
Hardwood......cubic feet..			42,719	10,197	94	52
Softwood......square feet..			467,884	81,632		
Umbrellas............number..	32,454	11,416	176,668	54,469	68,278	61,848
All other articles................		265.487		1,620,974		1,738,260
Total....................		2,335,165		9,328,055		10,250,953

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

Changsha and Yochow, the two treaty ports in the Province of Hunan, are interior ports. Changsha is situated in the interior of the Province on the Siang River and is accessible from Hankow by steamers drawing between 8 and 12 feet, depending on the rise and fall of the water in the river. Yochow is situated on the passageway that connects the Tung Ting Lake and the Siang River with the Yangtze River, and is accessible to boats drawing up to 12 or 15 feet. The river route has been, until recently, the only available practical route for trade between Changsha and foreign countries. The following companies are engaged in the transportation of merchandise: Butterfield & Swire, agents for the China Navigation Co., two steamers; Jardine, Matheson & Co. (Ltd.), managers for Indo-China Steam Navigation Co., one steamer; Nisshin Kisen Kaisha, two steamers; China Steamship Co., one steamer (Changsha-Shanghai direct). With the exception of the China Steamship Co., a Chinese concern, the ships of all these shipping companies ply simply between Changsha and Hankow, where goods are transshipped to Shanghai. In addition to these companies there are the Standard Oil Co. of New York, which maintains vessels for the transportation of kerosene and for charter, and the Asiatic Petroleum Co., which also maintains ships for the transportation of its own product. Both Changsha and Yochow are now connected with the port of Hankow on the Yangtze by a railway that furnishes an alternative route to the steamer route. The railway route is useful during the winter months when the water of the river is generally too low to permit steamer navigation.

FACILITIES FOR TRAVEL.

There are as yet no hotels under foreign management in Changsha or Yochow. Changsha has a very large hotel under Chinese management that can accommodate foreign guests. Its rates are similar to those of the large foreign hotels at Hankow or Shanghai, averaging $8 Mex. per day. The best time of the year for visiting Changsha and Hunan is in the fall during the months of October and November.

TRADE ORGANIZATIONS IN DISTRICT.

There is a Chinese Chamber of Commerce at Changsha, and so-called chambers of commerce are established at a large number of the more important district cities throughout the Province. The smaller chambers of the district cities are, in name, more or less subordinate to the general chamber of commerce at Changsha. The most important function of the chamber appears to be its work of arbitrating claims. Outside of the chamber of commerce, but closely related to it, are the trade and provincial guilds, such as the Kiangsi guild, the glass dealers' guild, the bankers' guild. These guilds are organized generally as mutual-benefit societies within the trade represented. The members contribute funds, which are administered by the guild officers and committees for the use of members, such as for funeral expenses and small loans. The guild operates as a whole for the protection of its particular trade. When the chamber of commerce decides upon some move that will affect the business men in general, it leaves to the trade guilds the details that are to be worked out by the various trades represented. The provincial guild is generally organized for the protection of natives of Provinces, for the transportation of deceased members to their native homes for burial, and for the purpose of aiding fellow-provincials who find themselves in straitened circumstances. They are charitable or mutual-aid societies rather than trade organizations, though they do and can exercise some influence on trade.

AMERICAN INTERESTS.

Hunan was perhaps the last of the 18 Provinces of China to admit foreign residents within its borders. The first Americans to establish themselves within the Province were missionary workers. They entered it in 1898. Commercial interests did not come in until later, when the two treaty ports of Yochow and Changsha were opened to trade.

MISSIONARY INTERESTS.

The work carried on by the American missions in Hunan is greater in extent than that of the missionary societies of any other nationality. It is maintained by the following missions: American Presbyterian Church Mission, Christian and Missionary Alliance, American

Protestant Episcopal Church Mission, United Evangelical Church Mission, Reformed Church in the United States, Seventh Day Adventist Church Mission, Evangelical Association, Faith Orphanage, American Bible Society, the Bible House of Los Angeles, and the Yale Mission.

The American Presbyterian Church Mission maintains head stations at five cities in Hunan, namely, Changsha, Changteh, Chenchow, Hengchow, and Siangtan. At the end of 1914 it had 54 American missionaries in the field and employed a total of 129 Chinese helpers, including unordained preachers, teachers, etc. The published reports show that at the end of 1914 the mission had 4 organized churches, 1,060 communicants, an average church attendance of 1,235, and 51 Sunday schools with a membership of 1,349. The mission, in addition to its evangelistic work, maintains 38 primary and intermediate schools, with 617 boys and 287 girls as students, and 3 high schools, with 68 boys, while 17 theological students and 3 medical students were also being educated. The total number of pupils in all its schools at the end of 1914 was: Boys, 685; girls, 273. The mission maintains 5 hospitals, 2 at Changteh, 1 at Chenchow, 1 at Hengchow, and 1 at Siangtan. The following table gives a summary of the mission's medical work:

Towns.	Number of hospitals.	Number of beds.	Number of in-patients.	Number of dispensaries.	Individual out-patients.	Out-patient visits.
Changteh	2	57	520	2	5,132	11,500
Chenchow	1	60	214	1	3,163	5,851
Hengchow	1	40	295	1	2,400	6,130
Siangtan	1	33	260	2	4,126	11,519
Total	5	190	1,289	6	14,821	35,000

The Christian and Missionary Alliance maintains a branch of its work in Hunan, divided between the stations of Changsha, Changteh, and Hansheo. The work of this society is chiefly evangelistic, though it maintains a number of churches and primary schools for boys and girls. The staff employed consists of 9 missionaries, 5 Chinese evangelists, 2 school-teachers, and 4 "colporteurs," a total of 20 workers. The estimated membership is given as 174.

The work of the American Protestant Episcopal Church Mission in Hunan is divided between that mission and the Church of England Mission, both missions working under the Chinese name of Chung Hua Sheng Kung Hui. The American section of this work belongs to the diocese of Hankow. It covers all that part of the Province north of the twenty-eighth parallel. The territory south of the twenty-eighth parallel belongs to the diocese of Siangtan. The American diocese conducts work in two places in Hunan, Changsha, and Changteh. At Changsha the society has a church with about 190 baptized members, including 50 children. It also has about 50 catechumens, or those preparing for baptism. The society also maintains the following schools: Boys' boarding school, upper primary, 37 pupils; mixed day school, lower primary, 60 pupils; boys' day school, lower primary, 36 pupils; girls' day school, lower and upper primary, 22 pupils; total number of pupils, 155. Besides ordinary parish work a good deal of street chapel preaching and all Bible-class work is done by the resident missionaries. One American missionary and his wife are stationed at Changsha. At Changteh the mission conducts only street chapel work.

The United Evangelical Church Mission operates in the eastern part of Hunan and includes Changsha, Liling, Siangtan, Yuhsien, and Chaling, at each of which places the society maintains mission stations. The society maintains 24 missionaries. The chief work of the mission is evangelistic. School work is carried on in two boarding schools as well as day schools at all of the stations and at a few of the out-stations. The number of pupils in boarding schools varies from 60 to 80 both in the boys' school at Liling and in the girls' school at Changsha. The mission is also interested in two union schools at Changsha to which it sends students. These schools are the Hunan Union Girls' High School and the Union Theological Seminary. The medical work of the mission is centered at Liling, where a physician resides and a hospital has been recently erected. Besides the missionaries mentioned above, the mission employs evangelists, colporteurs, school-teachers, and other Chinese helpers.

The Reformed Church in the United States maintains two stations in Hunan Province, one at Yochow and the other at Shenchow in western Hunan. The work is divided into evangelistic, medical, and educational activities. In Yochow the mission conducts the Lakeside Schools, with an attendance of 120 boys. At Shenchow it maintains the Eastview Schools, with an attendance of 78 boys. Girls' schools are conducted at both Yochow and Shenchow, with an attendance of 39 at the latter and 20 at the former. Two hospitals are maintained, one at Yochow and one at Shenchow. There are 19 missionaries, including wives, stationed in the field.

The Seventh Day Adventist Mission maintains a station in charge of a foreign missionary at Changsha. The work is wholly evangelistic. The mission employs 35 workers, 25 of whom are doing evangelistic work, while the remaining 10 are engaged in selling literature of a religious nature. All of these are Chinese. The mission numbers 366 members and an additional 150 who have not yet been baptized. The work is carried on at 18 places in the Province.

The Evangelical Association is centered at the city of Shenchow in western Hunan. There are eight missionaries maintained there. Their work is evangelistic, educational, and industrial. Evangelistic work is carried on with the assistance of a number of Chinese and includes three out-stations in addition to the city of Shenchow. The educational work includes a lower and a higher primary school for boys, a lower primary school for girls, and a school for the religious training of evangelists. Industrially, needle work is taught to women, and the mission maintains a printing press for the printing of books, tracts, and other literature.

At Changsha an independent organization, known as the Faith Orphanage, and supported by the funds received from churches in the United States, has been engaged for some years in caring for destitute and parentless children. The orphanage is in the care of an American family. The girls are taught needle work and the boys are instructed in useful trades, and all are required to attend the school of the orphanage. The orphanage has a printing press that is used for the printing of religious tracts.

The American Bible Society maintains an agency at Changsha with one American in charge. The agency has been established there since 1910. It is engaged solely in the distribution of Bibles, Testaments, and Scripture portions throughout the Province. The American in charge is assisted in his work by a number of Chinese colporteurs and other Chinese employees.

An interesting work concerns itself with the annual pilgrimage of Chinese to the sacred mountain of Nanyueh, situated not far from Hengshan and Hengchow on the Siang River. To this mountain in the fall of each year there wends its way a great body of pilgrims, made up of all classes of Chinese intent on visiting the mountain for the purpose of accomplishing some penance and making sacrifice to the spirit of the mountain to secure its aid in their work. The Bible House of Los Angeles has provided funds, tracts, and religious posters wherein are printed portions of scripture in the Chinese language, and a prominent member of the Wesleyan Mission supervises the work of distributing these tracts and portions of scripture to the pilgrims who visit the mountain. The work is carried on only during the season of the pilgrimage, which continues for about a month in the early fall of each year.

The Yale Mission began its work at Changsha in 1904. Its work is principally educational and is maintained with the help and assistance of the alumni of Yale University. Its aim has been the establishment of a college of arts and sciences, with provision for normal training in the college or a separate department. A second aim was to devise a scheme by which the Yale medical staff might have a part in medical education of high grade. The college has moved into its new buildings located on high ground just north of the city of Changsha, where a dormitory, chapel, temporary recitation halls, and faculty residences have been erected. At the end of 1918 an outdoor gymnasium was begun on the college campus. Other buildings are planned for the year 1919, including a dormitory for the college of medicine and a scientific laboratory.

The medical school has been running since 1915. A hospital, which is the finest in this part of China from the point of view of equipment and size, has been erected near the campus of the college and is to form the center of the medical educational work that the Mission is now undertaking with the assistance of the gentry of Hunan. The assistance of the Hunan gentry has been secured as the result of an agreement whereby the Hunan provincial government undertook to give a grant in aid, to be paid through an association of Hunan gentry who should have joint control with Yale of the medical and nursing schools. Under this agreement the Yale Mission is to provide the foreign staff and hospital, and the Hunan gentry by means of the subsidy are to provide the running expenses of the medical and nursing schools and hospital and the necessary buildings for the schools. The China Medical Commission of the Rockefeller Foundation has assisted this work by providing a number of the doctors who are to serve on the medical and teaching staff of the hospital and medical school.

The staff of the Mission includes 12 men in the collegiate department and six in the medical department, including one woman doctor and one woman nurse in charge of the nurses' training schools. Buildings have been erected under the supervision of an American architect. The architectural features represent a concession to Chinese ideas, the buildings having curved roofs and massive walls. The hospital has been equipped with American hospital equipment, beds, instruments, etc., and has its own electric power plant.

It will be seen from the foregoing account that the American missionary interests in Hunan are large and progressive, and have involved the expenditure of large sums of money. The value of the educational work accomplished by these bodies is acknowledged by all.

Among other missionary organizations in the Province one may mention first, the Liebenzell Mission, a part of the China Inland Mission. Its missionaries are German; they maintain stations in the central and western part of the Province and have, besides a church at Changsha, a school for the blind. The Catholic Mission has been established in the Province for a great number of years. It is stated that during the reign of Kang Hsi (1662 to 1723) almost every town in Hunan possessed a Catholic Church, all of which were later destroyed or converted into pagodas, examples of which are to be seen at Changteh and Siangtan. Perhaps the first foreigner to enter the city of Changsha was of this mission. It is recorded that Bishop Jean de Frioria was brought to Changsha in 1816 for execution for having propagated the Christian religion and faith, having entered China without permission. Other missions are the English Wesleyan, the Norwegian, and the Finnish. The Norwegian Mission maintains a hospital, church, and school at Changsha and a school at Yiyang. The Wesleyan Mission employs about 34 missionaries in the field in Hunan and maintains seven stations. Their work is chiefly evangelistic, but educational institutions are maintained. The Finland Missionary Society employs 18 foreign workers who conduct churches and schools. Their work is limited generally to that part of the Province north of the Yuan River.

The American missionary interests would seem to be conducted on a much larger scale that any other missionary interests in the Province. However, these interests have divided up the Province more or less evenly among themselves so that their interests do not conflict. Some of the Protestant missions have joined in conducting at Changsha a Union Theological Seminary for the training of preachers. Some of the Protestant missions also have joined, as stated above, in the conduct of a high school for girls at Changsha.

COMMERCIAL INTERESTS.

The opening of Yochow to foreign trade in 1898 opened the Province to foreign commercial interests. In 1904 Changsha was opened to foreign trade and the Standard Oil Co., the first of the large American firms to establish itself in Hunan, started an agency there. Since then its business has increased yearly. The company now maintains at Changsha a foreign staff of six men, with two more stationed in the district commanded by Changteh. Large storage tanks are maintained at Changsha into which oil is stored from the distributing tanks at Hankow. A motor barge of 140 tons burden is maintained for the carriage of kerosene to the various agencies of the company located on the waterways of Hunan. The Singer Sewing Machine Co. also maintains an agency in Changsha in charge of one foreigner, who has supervision over the work of the Changsha agency and of the branch selling offices established at various cities in the Province. These two firms were, until the last few years, the only American firms actively engaged in the selling of American products in Hunan. One or two of the British or German firms established at Changsha have held agencies for American manufacturers and sold quantities of American goods. In the beginning of the year 1916 an important American import and export firm, with head office at Shanghai, established an agency at Changsha with an American in charge. They are the first general agents of American nationality dealing generally in products of American manufacture to establish themselves in Changsha. They are selling electrical supplies and equipment, pumps, mining machinery, hoisting and conveying machinery, dynamite, internal combustion engines, structural steel, chemicals, laboratory supplies, etc., and in spite of disturbed conditions have made an excellent beginning.

Compared with other nationalities, American business men appear to have been slow to realize the commercial importance of the Province of Hunan. Japanese and British shipping interests have established river steamers connecting Changsha with Hankow. British, German, Japanese, and Belgian firms have long realized the importance of the mineral resources of Hunan and have had agents in the Province engaged in assisting Chinese mining interests with capital, selling them machinery, and generally pushing the trade of their respective nationals. Until the outbreak of the war the German firms established at Changsha were perhaps the most energetic, buying the raw products of the Province, and, in turn, selling German machinery. American manufacturers will find a very promising field among the mining interests of the Province for the sale of mining machinery of all kinds. The cities of the Province are waking up to the advantages of electric lights and telephone systems and are ready to purchase from the firm making the most attractive offer from the point of view of both cheapness and quality.

GENERAL TRADE SUGGESTIONS.

With the natural resources of the Province almost untouched, a tremendous amount of expansion is yet possible in the import trade of Hunan.

The American merchant, in order to enjoy a portion of this trade, must do his share to raise the purchasing power of the people of Hunan. In order to do this he must offer a market for the raw products of the Province. There must be an exchange of commodities. The American must do his part toward furnishing capital for developing industries and encouraging the opening of mines and the exploitation of the natural resources of the Province. The war in Europe gave a tremendous impetus to mining interests in Hunan. A great demand was created for antimony, one of the chief (and best developed) mining resources. The result was that many mines were opened, employment was afforded to large numbers of people, and the standard of living in the immediate neighborhood of the mines began to rise at once. Prices rose at the same time. There was more money and the mining districts began to enjoy increased prosperity. This demonstrates the effect of raising the producing power of the people, for it stimulated production and encouraged the use of foreign and modern methods. The miners discovered that when antimony values fell below a certain point, it did not pay to work some of their mines using old methods of production. If they can be shown that by the use of modern labor-saving devices they can keep their mines open and working at a profit in spite of fluctuations in the selling price, other conditions having been taken into consideration, a further impetus to prosperity will be given and every one will profit thereby—not only the Hunan resident but the American maker of goods for sale.

METHODS IN PIECE-GOODS TRADE.

That there is an excellent and growing market in Hunan for goods of certain kinds that can be purchased in the United States as well as anywhere else is evident from a study of the import figures. Cotton piece goods form an important item in this trade. At present they come for the most part from England. The trade, however, is not direct. The piece-goods business centers at Shanghai and Hankow, but principally at Shanghai, where the piece-goods auctions are held. It is to these auctions that the Chinese dealers in foreign piece goods repair for the purpose of replenishing their stocks.

There is some question as to whether these auctions can be disregarded by the foreign manufacturer, and while it is the opinion of some that increased business could be done by direct dealing with the Chinese purchaser in Hunan, the writer believes, after examining into the circumstances surrounding the business at Changsha, that the piece-goods trade is too firmly centered at Shanghai to allow a shift of much of the trade to the interior, until a more suitable currency is adopted and better banking facilities are afforded the business man. What are the steps taken by the Changsha dealer in piece goods when he desires to replenish his stocks? He writes a letter to his purchasing agent in Shanghai, who is a member of a group of purchasing agents known to the Shanghai piece-goods trade as the Hunan "Pang K'o," or Hunan "guests," who frequent together one of the many hotels that cater to the traveling merchants temporarily residing at Shanghai. Sometimes this purchasing agent is a personal representative of the Changsha dealer—very probably a relative of the manager or head of the Changsha firm. Most often, however, he is a professional purchasing agent or broker who buys for two or more Hunan dealers. If the Hunan firm has no deposit with this purchasing agent, it makes remittances with its order, in which it asks the purchasing agent to secure certain specific piece goods for it from the dealers at Shanghai. These remittances are made by Chinese bank draft on Hankow or Shanghai, according to exchange conditions in the two centers.

Now this purchasing agent living in Shanghai receives visits each day from numerous market "shroffs" (clerks) who are in the employ of the larger piece-goods "hongs" (firms) and also from independent piece-goods brokers, who carry with them samples and price lists but are not attached to any particular hong or dealer. The purchasing agent has his choice of buying from the market shroff, who will take the order to his employer, or from the piece-goods hong, or of entrusting his order to one of the independent piece-goods brokers who will peddle it to all of the piece-goods hongs forming his particular clientele. Through one of these channels the purchasing agent will get in touch with a piece-goods hong stocking either all or part of the goods he wants, and he will make his purchase, paying cash. He may not secure the whole order from one hong but may distribute the order among several hongs, either because of differences in price asked or because of lack of stocks.

Now the piece-goods hong is a large Chinese firm that deals directly with the foreign import merchant at Shanghai. It keeps stocks of standard goods on hand to meet orders. The procedure of the representative of the piece-goods hong is to go to the piece-goods auction or to the foreign import merchant to order his cargo. In the latter case the foreign import merchant requires him to sign a contract whereby he agrees to take a fixed quantity of cargo at a fixed gold price. The piece-goods hong in signing such a contract must take into consideration the rate of exchange between gold and silver, with the possibility of a drop in the value of silver before it can obtain and dispose of its cargo, because its business with the up-country merchant is done on a silver basis. It must pay the foreign import merchant in sterling or its equivalent in silver, and naturally if the gold value of silver falls before it can get its cargo paid for or disposed of, it suffers a loss proportionate to the variation in exchange. In other words, the Chinese piece-goods hong bears the risk resulting from exchange fluctuations. The up-country merchant takes no risk whatever so far as exchange is concerned. The foreign import merchant protects himself against risk by his contract with the piece-goods hong.

In other words the piece-goods hong merchant at Shanghai renders the same service to the trade that is rendered by the so-called export house to the European or American manufacturer. He is skilled in foreign exchange and he knows and is well known in the market. The up-country merchant pays him for his expert information and does so gladly in order to avoid the risk and trouble attendant upon a fluctuating exchange. It is for this reason that the writer does not consider it likely that the piece-goods hong merchant, the piece-goods auction, the piece-goods broker, and the buyer's representative of the up-country dealer, all located at Shanghai, can be done away with as yet. One German firm at Changsha was in the habit of keeping stocks of piece goods at Changsha, but Chinese merchants at Changsha say that they prefer to make their purchases through the old channels at Shanghai rather than go to the local market, whose stocks might be short.

COURSE TO BE PURSUED BY AMERICAN MANUFACTURERS.

The above account also applies to other products besides piece goods, and to the American manufacturer or merchant who contemplates entering the Hunan market the writer would give the following advice:

First. Decide definitely whether you want to enter the Hunan market. Ask yourself whether you want to sell your product in Hunan.

Second. Do not depend on catalogues with discount quotations. They mean nothing to the Chinese buyer who can not read English or any other foreign language and who finds it at present easier to go to the foreign import house at Shanghai to obtain his goods than to take the trouble of examining catalogues and entering into correspondence with foreign merchants about some product that he may or may not be able to sell.

Third. Send a personal representative to Hunan with stocks and samples. The treaties permit him to travel throughout the Province, and he can demonstrate his wares at any place. The missions expand their work by street preachers, who, indeed, are the pioneers of the missions. Where are the street preachers of trade? A firm dealing in cigarettes in China makes it a practice to send its men up and down the Province and distribute free samples and advertising matter and take orders and establish agencies. The American merchant and business man must follow a similar procedure and get into personal touch with the Chinese dealers, sending out his street preachers and demonstrators. If he wants the thing done well he must do it himself. He can not expect to win a market for his goods unless he takes a personal interest in the struggle. He should not depend on someone else to do the work for him. He must not expect an agent of European nationality to push American-made products, which probably compete with European-made articles that such an agent already handles.

Fourth. If the American merchant finds that the Hunan market furnishes no present demand for his product, he should inquire as to whether he may not create a future demand. He should study the market and endeavor to manufacture an article that the market will buy. He should educate the market so that he can bring about a demand for his product. To this end let the manufacturer of mining machinery install a complete set of mining machinery in a mining school located in Hunan. The mining engineers educated at such a school, becoming familiar with the machinery of the American manufacturer, will go forth to the mines and specify for the machinery to which to which they have become accustomed. Send a demonstrator into the mines to show the miner how the production of his mine may be increased. Distribute motion-picture films illustrating processes of manufacture prevailing in the preserved-food trade, the uses to which machinery of various kinds can be put, and the work that it can accomplish. Examine personally the native methods of treating the rice and other crops, and discover whether some simple machine that will find its place in farm economy can not be made for the market. It did not take the German merchant long to demonstrate to the Chinese the usefulness of his aniline dyes. A sewing machine company that does a large business in China maintains schools to teach men and women the use of the sewing machine.

Fifth. Advertise by means of Chinese newspapers, lithographed calendars, fans, posters, etc. Where are the cotton baseball caps that every boy in an American country town rejoices in the possession of each spring—each cap highly colored and bearing the advertisement of some enterprising merchant? Such caps could be distributed among coolies and children from one end of Hunan to the other. At the beginning of a recent summer, when the minds of the Chinese turned naturally to fans, the city of Changsha was flooded with small bamboo and paper Japanese fans bearing on one face an illustrated poem in the Chinese language and on the reverse a picture of the factory in which a well-known Japanese proprietary medicine is made, with a list of its uses, in Chinese. These fans were in the hands of everyone throughout the city in a short time. One foreign firm at Changsha advertised its wares by distributing coats among the public jinrikisha coolies, with the trade name of the firm in large picturesque Chinese characters in the middle of the coolie's back, just where it would meet the eyes of the fare. The jinrikisha and chair coolies at Changsha wear large, round, dome-shaped hats to shelter them from the rain. These hats are made of oiled paper on bamboo frames. They are cheap and, with advertising matter painted on their broad, sloping tops, would make excellent advertising mediums. There are a thousand and one ways of bringing one's wares to the attention of the people of Hunan. One Sheffield cutlery firm presents to Chinese dealers who handle its goods attractive steel pocketknives with the Chinese "chop," or trade name, of the Chinese agents cut into the blades. Here not only are the wares and workmanship of the manufacturer advertised, but also the Chinese agent or dealer selling them, who takes pride in presenting such a knife to a prospective customer. The Chinese language only should be used in advertising, except where one or two English words belonging to the trade-mark or name can be used as essential parts of the advertisement.

Sixth. International competition is tremendously keen among the foreign import merchants. The German merchants court the trade by giving long credit terms. The Japanese have established a merchants' school at Shanghai in which they educate their own men for the Chinese market, encouraging them to make journeys of investigation throughout the country. British bankers lend money on Chinese industrial concessions, and their engineers, employed to carry out construction work called for by such concessions, specify according to British standards. Into this competition the American merchant must enter, and he must adjust his business methods to meet those of his European competitors.

On the other hand, the Chinese customer knows little or nothing of this competition, except that he profits by the results, buying where he can get the best goods for the least money. If you ask a Chinese merchant where his stock comes from, nine times out of ten he can not tell you without looking at the article in question, except in one or two cases where the supply comes from one country only. He knows quality, prices, and "chops" or trade-marks that have become guaranties of the character of the goods. He does not ask whether the "chop" or trade-mark is British, Russian, or American. It follows, therefore, that if the American merchant's wares meet the requirements of the trade and compare favorably with the prices charged by others he can sell his goods in Hunan.

Assuming that the American manufacturer or merchant, after taking the above-mentioned conditions into consideration, has determined to enter the market in Hunan, the following suggestions are offered. He has already discovered that the Chinese merchant of Hunan is unable to engage in direct trade relations with the United States, and he has probably decided to establish his own agency in China. To this end he should either grant an exclusive agency to some firm in Shanghai, sending out an experienced sales agent to cooperate with the said firm, traveling about the country for purposes of demonstrations, etc., or he should establish his independent agency, preferably in Shanghai.

VITAL FACTORS IN FAR EASTERN TRADE.

In the latter case he must take into account the following factors that enter universally into the trade of the Far East, where there are no mercantile agencies to furnish information as to the standing of Chinese firms and where problems of exchange add to the risk of import and export trade. Excluding the foreign banks, these factors are:

(1) The comprador, who is the Chinese member of the agency. The comprador is the "right-hand man" of the agent. He takes the place of Dun and Bradstreet. He knows the Chinese with whom business is done and, by his contract with the agent and his money deposit, guarantees all transactions between the agent and such Chinese firms, making himself personally liable for any losses incurred by the agent as a result of the failure of a Chinese firm to fulfill its share of a deal.

(2) The Chinese foreign-goods dealers of Shanghai, who sell to the up-country traders. Sometimes the agent's comprador may establish himself as a foreign-goods dealer. Generally, however, these are independent agents, each with his own staff of market shroffs or clerks. These foreign-goods dealers, as already stated, bear the risks, and they are the intermediaries between the foreign sales agent, whose business is done on a gold basis, and the Chinese up-country merchant, whose profits are calculated in silver.

(3) A form of advertising that is almost indispensable in the East and that should not be forgotten by the American manufacturer establishing an agency in China. This consists in entertaining. Along with entertainments go gifts. A great deal of profitable business finds its beginning in the informal and friendly intercourse that centers about the banquet table. In a European or an American city, the merchant has his club, to which he goes and meets fellow business men as on a neutral ground apart from their business world. There are no such clubs in China where Chinese and foreign business men can meet. Their place is taken by the banquet table, and the foreign agent should be given a liberal entertainment allowance and encouraged to meet Chinese business men on the common ground of hospitality. Under such circumstances personal prejudices and misunderstandings disappear and mutual friendships are encouraged. In the conversation that goes about, opportunities are discovered for financing and undertaking business enterprises mutually profitable. These methods are followed with success by the European competitors of the American manufacturers in these markets.

As a final word on this subject, the writer would urge the American manufacturer to encourage his agent to acquire a knowledge of the Chinese language. It is a means of breaking down the wall that the foreigner finds between himself and the Chinese with whom he would like to have friendly intercourse. To obtain a fair acquaintance with the spoken language of the country is not a difficult task. Many foreign firms already engaged in business in China encourage their young men to study the language by giving bonuses on the passage of examinations.

CHEFOO CONSULAR DISTRICT.

By Consul Lester Maynard.

LOCATION AND AREA.

The Chefoo consular district formerly included all that part of Shantung Province south of the Yellow River with the exception of Kiaochow, and comprised the large peninsula extending from the northern part of China into the Yellow Sea with the Gulf of Chihli for the northern boundary. The present report will be based on the original extent of the district before the establishment of the United States consulate at Tsinan. The district was included between 35° and 38° north latitude and 115° to 123° east longitude; in latitude it corresponds, therefore, to the central portion of California, although it is very different in climate, being more like the State of Maine in that respect. The original land boundaries were Chihli Province on the west and Honan and Kiangsu Provinces on the south. The establishment of the consulate at Tsinan reduced the Chefoo district to the small mountainous area at the eastern end of Shantung, which may be briefly described as including the 12 eastern hsien (counties) of the 107 hsien that form the entire Province.

The area of Shantung Province is 55,984 square miles, which is about the area of the State of Iowa, but allowance must be made for the fact that that part of Shantung Province which is north of the Yellow River is within the Tientsin consular district and the area of Kiaochow is within the Tsingtau consular district.

POPULATION.

The population of Shantung Province, which is the most densely populated Province in China, is estimated to be about 30,000,000, making the density about 525 per square mile; the total may be compared to the combined populations of the States of New York, Pennsylvania, Illinois, Ohio, Texas, and Massachusetts according to the 1910 census. The density of population per square mile is greater than that of the State of Rhode Island, which is the most densely populated State in the United States. It should be borne in mind, however, that there is no comparison between the products and industries and the scale of living of the two peoples. Shantung Province is more densely populated in the west, being relatively thinly populated in the mountainous region and having considerable areas that are unsuitable for human habitation—mainly along the lower reaches of the Yellow River, where the country is subject to inundation.

PHYSICAL FEATURES.

The southern and southwestern parts of Shantung Province are mountainous, with a watershed bisecting that part of the Province running southeast to northwest, and with numerous small streams flowing north and south, those flowing north being the more important.

The extreme western part of the Province is the valley of the Yellow River, being flat and low and cut up by many streams. This area, as stated, is subject to floods.

The central part of the northern section of the Province is a barren plain, also subject to inundation, and running southeast from this region, from the Gulf of Chihli to the Yellow Sea, is a valley of comparatively low land. East of this valley and including the entire peninsula the country is mountainous and rugged. There is almost a total absence of forests in the Province.

CLIMATE.

The climate of Shantung Province might be compared with that of the State of Maine. The winters are long and severely cold and dry and the summers short and not excessively hot or moist. The points along the coast are cooler in summer and more exposed to the severe winter storms. The average rainfall at Chefoo, which is on the northern coast of Shantung Province, is about 26 inches per annum and is confined mainly to the months of June, July, and August. The heaviest snowfalls are in the last part of December and the month of January.

The maximum monthly humidity is 85 per cent and the minimum 82 per cent. The latitude of Chefoo is 37° 34′, with a mean monthly maximum temperature of 79° F. and a minimum of 29° F. The mean instantaneous temperature is 55°, with a maximum of 106° and a minimum of 9°.

The Province is subject to both prolonged droughts and sudden floods, and this is mainly due to the lack of forests. The floods in the valley of the Yellow River are very destructive, and usually disastrous, sweeping over a great area of country, claiming heavy tolls in human life and causing widespread poverty.

POLITICAL SUBDIVISIONS.

Tsinan (Tsinanfu) is the capital of Shantung Province, and is located in the central-western part on the western foothills, about 5 miles south of the Yellow River. Tsinan is the seat of the civil and military governors of the entire Province, and directly under the former are the two commissioners of foreign affairs with headquarters at Tsinan and Chefoo and the four taoyins stationed at Tsinan, Chefoo, Tsining, and Tungling.

The commissioner of foreign affairs at Tsinan has jurisdiction over the districts controlled by the three taoyins of Tsinan, Tsining, and Tungling, whereas the offices of commissioner of foreign affairs and taoyin of Chefoo are administered by one official.

These districts are further divided into hsien (counties) and the highest official of each hsien is a magistrate, who in turn has assistant magistrates and submagistrates functioning under him at the more important centers within his hsien. There are 107 hsien in Shantung Province.

All these officials have administrative and judicial functions, and matters in which foreigners may be interested come within their jurisdiction. Appeals from their acts or decisions are possible—from the lowest official to the magistrate of the hsien and from him to the taoyin or the commissioner of foreign affairs of the district, and, in turn, to the governor of the Province, with the last appeal to the central Government at Peking.

EDUCATION.

Prior to the revolution of 1911 little attention was paid by the Government to modern educational methods, and, although provincial schools existed throughout the Province, the administration of the schools and the method of teaching and lack of discipline proved most unsatisfactory. Following the revolution the few who were interested in improving educational standards worked earnestly for progress, but the results of their efforts have been rather discouraging and not much improvement can be noted in comparison with the former methods.

The number of higher and technical schools has remained stationary and the number of middle schools has decreased. A considerable increase has taken place in the number of intermediate or higher primary schools and an especially large increase in the primary schools and in enrollment, but improvements in buildings and equipment have not kept pace with the increased requirements. The education of girls and young women has received considerable attention since the revolution in 1911. One evidence of the adoption of western methods is the wearing of uniforms by the students of government schools and the introduction of western athletic sports and military drill.

Out of a population estimated as high as 30,000,000, there are less than 100,000 pupils enrolled in all the Government schools in the Province, and, although there is no census, it is safe to estimate an overwhelming percentage of illiteracy.

In sharp contrast to the lax methods and poor results odtained by the provincial schools is the efficiency displayed in the conduct of the various missionary educational institutions throughout Shantung. Most prominent of all the educational institutions is the Shantung Christian University at Tsinan, conducted jointly by American and British missionary interests. Recently all branches of this university were concentrated in Tsinan and housed in modern buildings with up-to-date equipment. The university includes a school of theology, with a normal department; a school of medicine, in conjunction with which there is a hospital and school for nurses; and a school of arts and sciences, within which it is planned to organize a department of applied industries. The site of the university comprises about 30 acres, and the entire property has an estimated value of more than $500,000 United States currency. There is an enrollment of more than 300 students. The university is controlled by a council elected by the cooperating missions and by the Chinese church affiliated with them, namely, the American Board, the American Presbyterian, the Church of England, the Canadian Presbyterian, and the English Baptist Missions.

Of lower grade are the various normal, industrial, middle, intermediate, and primary schools and kindergartens conducted throughout the Province by different missionary societies. Generally speaking, the practice is to confine the higher education to the instruction of prospective preachers and teachers who will confine their future activities to furthering the work of the mission in this field. With the exception of the treaty ports, where Chinese are educated for work in the offices of foreigners, instruction is confined to the Chinese language. The Temple Hill English School, conducted by the American Presbyterian Mission, and a small school at Weihaiwei are the only institutions in the Province specializing in commercial education and conducting a business-college course in the English language. At stations where foreigners are employed to conduct the educational work of the mission and where the pupils enter boarding schools, more serious progress is being noted, but the great majority of mission schools are conducted in the villages by Chinese teachers who are poorly equipped for the work and have inadequate facilities; in consequence, results are poor. The American Presbyterian Mission is conducting a special school for the deaf at Chefoo and the American Mennonite Mission a special school for the blind at Tsaohsien.

A third class of schools consists of those organized by private Chinese individuals or groups for the education of the village children. This class of school was prompt to adopt the "new" or "western" method of teaching, and results were found more satisfactory in these schools than in the government or missionary lower-grade schools. This class of school, however, is rapidly disappearing from the Province, as recent enactments require the establishment of government schools, making these private schools unlawful. A number still secretly exist, and, unfortunately, the government schools that are to take the place of the closed private schools sometimes fail to materialize, with the result that illiteracy is increasing. With the exception of the Japanese schools for Japanese there are no foreign secular schools.

As a part of the Shantung University, the medical college occupies the premier position for medical instruction in Shantung Province. In the various hospitals conducted by missionary or religious societies primary instruction is given, and students so educated may eventually take up higher branches of medicine in the univeristies in China or abroad. There are three special schools for nurses conducted by foreign mission hospitals, mainly to fill vacancies in the nursing staffs.

The Shantung Christian University is well equipped with modern school supplies, and almost without exception the higher government and mission schools are similarly satisfactorily equipped. The reverse is the case with the great majority of primary schools of all classes.

A number of modern hospitals have been established at various points in Shantung Province, the most important being under missionary control. Of these there are nine American hospitals, and the most prominent is the Temple Hill Hospital of Chefoo, which is considered one of the best-equipped hospitals in China.

The introduction of western methods of teaching has naturally led to a demand for foreign school supplies, but because of financial reasons it has been possible to meet this demand only in the university at Tsinan and the higher grade schools of the principal cities of the Province.

Rapid strides have been made in the introduction of foreign medicine and medical methods, including surgery and dentistry, in Shantung Province, and with the growth of confidence the demand for modern appliances and supplies is greater than the financial means of purchasing them.

AGRICULTURE.

On account of the mountainous character of a large part of Shantung Province, the sandy nature of much of the soil of the lowlands, and the extremely dense population, it is imperative that every available patch of land that is fit for cultivation be intensively worked. In certain sections, however, because of unsettled conditions, a considerable acreage that might be cultivated is unused. But this is the exception, and in other parts of the Province the mountains are terraced to extend the cultivable area. In places the lowlands, which are subject to inundation and which after flood prevention could be cultivated, are now covered with sand.

The principal crops are millet, beans, wheat, corn, peanuts and walnuts, sweet potatoes, barley, kaoliang (kaffir corn), tobacco, fruit, cotton, and mulberry and scrub oak for sericulture. In addition, there are lesser crops of buckwheat, ginger, hemp, rice, and sesame. The fruits consist of grapes, pears, plums, peaches, apples, persimmons, apricots, and melons. Truck gardening is a most important occupation throughout the entire Province. The estimated yields per acre of the principal crops, so far as ascertainable, are as follows:

		Per acre.
Barbados millet	bushels..	30
Barley	do....	17
Beans	do....	16
Kaoliang (kaffir corn)	do....	31
Corn	do....	24
Cotton	pounds..	636
Ginger	do....	5,000
Hemp	do....	1,000
Millet	bushels..	30
Peanuts	pounds..	2,995
Peas	do....	867
Rice	do....	2,400
Sesame	do....	798
Sweet potatoes	bushels..	118
Tobacco	pounds..	667
Wheat	bushels..	19

Winter wheat is planted in September and harvested in June, and spring crops are planted in March and harvested from June to August, with sweet potatoes harvested in September.

The crop of peanuts, which is very extensive, might be increased in many parts of the Province by the utilization of uncultivated land that is not suited to other crops, and the exports of this important nut could be largely augmented. Both shelled and unshelled peanuts, as well as peanut oil, are of growing importance in the export trade of Shantung Province.

To a much smaller extent beans and bean oil are exported. Bean cake is usually retained for local use as cattle feed and as a fertilizer. The local production is not sufficient for the latter purpose alone, and considerable quantities are annually imported from Manchuria.

Wheat and, in smaller quantities, kaoliang and millet are grown in quantities greater than are needed for consumption in the immediate locality of production, but such excess is consumed in other parts of Shantung Province and is not exported abroad. In many cases where exportation, even to neighboring hsien, occurs, it does not represent a true excess, as the necessity to import articles urgently needed and not produced locally compels the farmers to sell products that should really be consumed locally.

In the neighborhood of Tsinan beef and eggs are produced in sufficient quantities to permit exporting.

Chihsia, Haiyang, and Laiyang produce and export ginger, and Tenghsien and Tsowhsien winter pears. Under the most favorable circumstances the Province could not grow sufficient foodstuffs for local consumption and is to a very great extent dependent upon Manchuria for the necessities of life.

Cattle-raising conditions vary greatly in different parts of Shantung Province, but on the whole this region is a good cattle country. In Lini, Chuhsien, Jihchao, Tancheng, Feihsien, and Ishui summer pasturage in the mountains is good, but there is no winter shelter and feed for large herds. In Penglai the herds are now plentiful and could be increased if there were the certainty of a good market. This could be done with profit if a modern packing plant could be established at a convenient shipping point on the railway. This would also permit the increased shipment of cowhides as well as pigskins and bristles. In Chaoyuan and Hwanghsien pigskins are now utilized. In some regions, notably Tsaohsien, Tsaochow, and Tingtao, cattle are plentiful and cheap and the number could be increased, whereas in other sections, such as Weihsien, Changlo, and Changi, lack of pasturage confines cattle raising to drafts animals only, and during periods of bad crops and high prices the cattle are of necessity sold purely for economic reasons. In other sections, particularly Tenghsien and Tsowhsien, afforestation is necessary to produce better pasture lands before the herds can be increased.

Farming methods in Shantung are most crude, the principal implements being native-made shallow plows, harrows, seeders, and hoes (similar to the broad side of a mattock). Mules and donkeys, with occasionally horses and oxen, are the only farm animals used.

Bean cake is extensively used as a fertilizer for the main crops and manure (animal and human) for vegetable fertilizers.

There is no system for financing farmers, who must seek their own private financial aid, usually at exorbitant rates of interest. Crops are marketed at stated periods according to locality, such periods ranging from two to five days.

Egg products and bristles are gathered throughout the district and enter extensively into the export trade of the important seaports, being also shipped in important quantities by rail.

The plaiting of straw braid is one of the most important industries in the Province and takes a prominent place in the exports.

MINERALS AND MINING.

Coal and gold are the most important minerals found in Shantung Province, and although apparently rich deposits have been located in numerous places little success has attended mining undertakings.

Iron deposits are also known to exist, but have not been actively mined. The richest deposit is in the neighborhood of Chinlingchen, on the Shantung Railway.

A diamond field near Ichow is also believed to exist, containing diamonds suitable for industrial purposes, but the exact location of the deposits has never been definitely ascertained, though extensive efforts have been made to that end. Regular mining operations have never been conducted.

Mica deposits have also been discovered in this Province, but, the quality being low, no mining operations have been undertaken.

Copper deposits have also been located in gold quartz, but not in quantities sufficient to be profitably worked.

The principal coal deposits are located in the southern part of the Province, the largest deposit being at Yihsien. Important deposits are also found along the Shantung Railway at Fangtze, Weihsien, and in the Poshan Valley.

The important gold deposits occur in the northern part of the Province, principally at Chaoyuan, Chiutien (near Pingtu), Chinnushan (near Ninghai), Hsiayutsen, and Kweishan. Numerous other deposits have been located, and attempts have apparently been made to obtain the necessary authority to work them, but all without result.

The administration of mining affairs is supposedly concentrated at the capital at Tsinan, under a certain degree of control from Peking, though mining development, particularly gold mining, in this Province seems in almost every case to have been controlled or retarded by the petty officials of the immediate locality. Mining and the taking up of mining claims by foreigners have always been discouraged by Chinese officials, and it was not until the conclusion of the Kiaochow Convention (which under clause IV granted German subjects the right to hold and develop mining properties for a distance of 30 li—10 miles—on either side of the Shantung Railway) that foreigners actively engaged in mining operations on a general scale. Since the capture of Kiaochow by the Japanese and their temporary taking over of the former German interests, the coal mines along the Shantung Railway and the iron deposit at Chinlingchen have been in their hands; with these exceptions no mineral deposits in the Province are being worked by foreigners.

The principal coal mine now being operated in Shantung Province is the Chung Hsing mine previously mentioned. Iron ore of good quality is also reported in this locality, but it has not been worked. A branch of the Tientsin-Pukow Railway has been built to Yihsien, where it connects with the mining company's railway for the purpose of hauling coal from this mine. These bituminous coal fields belong to the Chung Hsing Mining Co., which was started in 1880 as a purely Chinese company. In 1898 German interests entered the concern with a view to extensive improvements, but 10 years later it again became a purely Chinese company. It is claimed that the mines owned by this company are the only ones that have been operated in Shantung Province at a profit.

The coal areas at Fangtze, Weihsien, and Poshan were all German properties, which came into Japanese possession in 1914 with the fall of Tsingtau at the time the Japanese took over the Shantung Railway. The mines at Fangtze were for a time fairly successful, the output being consumed by the railway and locally, but later it was deemed advisable to abandon them on account of excessive water and indications that the supply of coal was diminishing. The Weihsien mines were considered unsatisfactory and were abandoned in favor of the Poshan coal fields. The mines in the latter valley proved to be by far the best. These mines produce sufficient coal for all operating uses as well as for the railway and military uses, and in addition to meeting the local requirements a considerable proportion is available for export. The mines are connected by a spur line to the main railway.

Considerable interest was manifested in the iron deposits at Chinlingchen by the former German owners, and shortly after the occupation of Tsingtau by the Japanese the latter constructed a branch railway from the main line to the locality of the iron deposits and plans were made to work the mines on an extensive scale; but apparently much time is necessary for thorough examinations and tests and the organization required for the work.

The gold mine at Chaoyuan is the only gold mine in Shantung Province in actual operation and is stated to be the only known gold mine that can be profitably worked. There are many difficulties to be overcome in the successful operation of this gold field, which covers a considerable area and lacks continuous veins, the gold being found in numerous pockets. Poor transportation facilities, with an absence of water, fuel, and timber at the mines, greatly add to the difficulties of profitable working. The mining methods now employed at this gold field are extremely crude, and it is only because of the cheap labor that the efforts of the present operators are successful.

The gold deposits at Chiutien near Pingtu were worked about 25 years ago. Recently Japanese mining men who have examined the tailings believe that they could be profitably worked, but apparently the mine itself is exhausted, though on this point there appears to be considerable controversy.

The gold deposits at Chinnushan near Ninghai, at Hsiayutsen, and at Kweishan, as well as in the neighborhood of Tengchow, Tungtsing, the Maoshan Mountains, Shaoanshan, Weihaiwei, and numerous other places are all in the same category. Indications of gold have been found, but all efforts to obtain mining rights or concessions have been unsuccessful. In some cases the deposits have been worked by the country people in the neighborhood of the mine, as for example at Hsiayutsen, where a great hole was dug, according to general belief, in the time of the Ming Dynasty, since which time there has apparently been no serious effort to work this property. At this mine copper is found with the gold.

In many places in the Province the country people wash gold from the streams in small quantities that in other countries would not be considered "pay dirt," but despite these indications there are no placer mines.

Except at the coal mines previously described, foreign methods of mining and the use of foreign mining machinery was confined to gold mining, and even in those instances failure resulted and the mines were shut down.

In view of the conditions outlined, there may be said to be at this time no possibility of introducing American mining machinery into Shantung.

WATERWAYS.

One of the main drawbacks to the development of the rich natural resources of this Province is the lack of suitable interior transportation facilities and, in consequence of this, the necessity for indirect shipping facilities with the important trade centers and countries of the world.

The main interior waterways of this Province are the Grand Canal, the Yellow River, and the Hsiao Ching River, though numerous smaller waterways are navigable.

The Hwang Ho, or Yellow River, enters the Province at the southwestern corner and flows toward the northeast, emptying into the Gulf of Chihli. The Hsiao Ching Ho branches from the Yellow River near Tsinan and flows in a more easterly direction, entering the Gulf of Chihli about 35 miles south of the Yellow River at Yangkiokow in Laichow. For a considerable distance inland between the two rivers is a barren plain which is subject to inundation.

The Grand Canal also enters this Province at the southern border, running in a northwesterly direction to the western border of the Province, where the canal turns and runs north. The canal crosses the Yellow River at a point about 60 miles southwest of Tsinan.

As a result of many years of neglect, silt has accumulated in the canal and the rivers to such an extent that in Shantung Province they are navigable in certain places only for very shallow native craft and in many places only for flat-bottomed boats. Inland water transportation is of vital importance to the economic life of this Province, and an important interchange of commodities is effected by this means of transportation. The waterways are important feeders to the railways.

Efforts are now being made to reclaim the Grand Canal, and if the channels of the Yellow and the Hsiao Ching Rivers were deepened and widened and the floods controlled, or if the proposed canal from Tsinan to the Gulf of Chihli paralleling the Hsiao Ching Ho should be constructed, the trade of the Province would be revolutionized by enabling small steamers to navigate these important waterways, converting the inland capital Tsinan into an important port in addition to its being the main railway junction.

The most important trading center situated on inland waterways is Tsinan, and of lesser importance are Tsining, Tehchow, and numerous other smaller commercial towns of varying degrees of consequence.

Rates of transportation vary greatly on different commodities, as well as with the journey to be undertaken, and no definite table under this heading can be given.

TAXES.

Numerous taxes are assessed on native and foreign goods when entering or moving in the interior. These taxes are assessed in different ways, and frequently a particular tax is subject to different methods of collection.

Foreign goods entering the country pay taxes to the Maritime Customs and when shipped to the interior either travel under transit passes, for which tax is paid upon issuance of pass, or by native customs, by which method the additional tax is paid at destination.

In some parts of Shantung Province, notably Chefoo, the transit-pass method is not in use.

These taxes are levied by the Government.

A further tax known as the "lotishui" is assessed on foreign goods at the place of sale and is in reality a local tax on imported goods, though it is collected under the direction of the Bureau of Finance at Tsinan and remitted to Peking.

Although the likin tax is not supposed to be in operation in Shantung Province, likin offices have been established everywhere and the regular likin tax is collected on goods passing the likin barriers. The collection of this tax is also under the direction of the Bureau of Finance at Tsinan and the proceeds are for the benefit of the central Government.

In addition to the above Government taxes, there is a water-police tax which varies at different places and a further water tax for the maintainance of particular waterways. As is the case with all the preceding taxes, the basis for levying the water taxes is the nature of the cargo. These taxes are levied in some cases at the beginning of the journey, in others upon the reaching of the destination, and in others at one or more places en route, or, again, it may be found that these taxes will be levied under all the above-mentioned circumstances.

A further tax is known as the commercial tax and is collected by chambers of commerce for municipal expenses within the jurisdiction of the chamber. This tax is in reality for registering firms, but as it is based on the quantity of cargo they receive and send, it may properly be included under the heading of taxes on goods moving within the Province.

Still another tax is levied for measuring junks. This tax varies greatly and is paid by the owner of the junk, usually for each journey. As the amount is included in the agreed price for carrying the cargo it is in reality an additional tax on moving goods.

Special taxes are imposed on wine and tobacco and may be levied at the place of origin or in transit or at destination or at the time of final sale, there being no definite rule covering all localities.

RAILWAYS.

There are only two railways in Shantung Province, one of which is a purely local railway operating entirely within the Province.

The northern section of the Tientsin-Pukow Railway enters Shantung Province at the northwestern corner near Sangchiayuan and runs in a general southerly direction until the Yellow River is reached at Chihohsien, where it branches sharply to the east entering Tsinan. From this point the line returns in a southwesterly direction to Chaomitien, whence it again runs south, leaving the Province in the center of the southern border.

The Shantung Railway starts at Tsingtau and runs in a general westerly direction to Tsinan, where it connects with the Tientsin-Pukow trunk line.

Roughly, 250 miles of the Tientsin-Pukow Railway traverses Shantung Province, and the Shantung Railway is 256 miles long. The branch of the latter line from Changtien to Poshan is 27 miles in length. Both railways have a gauge of 4 feet 8½ inches.

The northern section of the Tientsin-Pukow Railway was completed in 1912, mainly with German capital, and was constructed under the direction of German engineers by the Chinese. The operation of the line has been purely Chinese.

The Shantung Railway owes its origin to the Kiaochow Convention of 1898, and the line was constructed with German capital and by

German engineers. Construction began in 1899 and the line was opened to traffic in 1904; it was operated by the German company, the Shantung Railway Co., up to the siege of Tsingtau in 1914. The line was reopened, after the fall of Tsingtau, on November 15, 1914, under Japanese control and management. The materials and rolling stock were all of German manufacture.

Because of the unsettled conditions in Shantung Province nothing definite can be stated at this time in regard to proposed extensions of the Shantung Railway. The administration of the Shantung Railway has its headquarters in Tsingtau (see chapter on Tsingtau consular district, p. 614).

There are no railways under construction in the Chefoo consular district, though for some years past there has been considerable agitation for a railway from Chefoo via Tengchow to connect with the Shantung Railway at Weihsien, with a branch from Hwanghsien to Lungkow.

Another contemplated railway is from Kaomihsien on the Shantung Railway, running southwest, passing through Ichow and connecting with the main line of the Tientsin-Pukow Railway at Hsuchowfu in Kiangsu Province.

Another railway is planned to connect the Tientsin-Pukow line with the Peking-Hankow Railway, this railway to start north of Tsinan and to join the latter line at Shuntehfu in Chihli Province.

There are no tramways in any of the cities of this consular district.

ROADS.

The Province may be classed as being without roads in the generally accepted modern meaning of that term. There are innumerable cart roads, pack roads, and footpaths extending to all parts of the Province, but they are not scientifically constructed nor is there any definite system of maintenance. Such roads and paths as are in existence are in some respects more important than the waterways, from the standpoint of communication and transportation. Crudely constructed native carts, with two wheels, without springs, and drawn by three mules, are the principal vehicles for transporting heavy cargo over the more important roads. For lighter loads, and to the more outlying parts of the Province, and over roads where carts can not be used, pack animals (donkeys and mules) are the main means of transportation. For heavier loads that must be transported over the paths, wheelbarrows guided and controlled by men and drawn by donkeys are in use. These wheelbarrows consist of a large central wheel with platforms on either side; the load is distributed about equally and the balance maintained by the man in control, who bears the weight of the handles by means of straps passing over his shoulders. On up grades the man assists the animal and occasionally, when traveling with the wind, a sail is used. Another method of transporting goods is by equally distributing the weight suspended from ends of a pole, which is balanced on the shoulder of a carrying coolie.

The more wealthy travelers use a native contrivance known as a "shenza." This resembles a large sedan chair with long shafts, between which two mules are harnessed, one in front and one behind. Certain of those unable to afford a "shenza" travel on mules or donkeys, but the great majority of the people when traveling even great distances are compelled by poverty to walk.

Rates of transportation vary so greatly with different conditions and localities that no definite statement can be made on this subject beyond the fact that when all factors are considered the average rate proves very high in comparison with other countries and that the methods of handling cargo are very unsatisfactory.

In the neighborhood of cities having a chamber of commerce a road tax is assessed by the latter on goods in transit for the purpose of maintaining the roads. Such repairs, however, are of a crude nature; scientific modern methods are not understood and in most cases are probably totally unknown.

Shantung Province is densely populated, and cart roads and paths that have in many cases existed for centuries reach the most remote places. Extensions are therefore practically unnecessary.

POSTAL FACILITIES.

Considering the lack of modern means of transportation, excellent facilities are furnished by the postal organization throughout the Province. There are 97 main offices, with 7 suboffices and 708 postal agencies in the more important places in Shantung Province, with the head office in Tsinan and first-class offices at Chefoo and Tsingtau. Money-order and special-delivery, insured-letter and parcel offices are maintained in the principal cities. More than 20,000,000 pieces of mail matter are received annually and about half that number dispatched, in addition to about 12,000,000 pieces in transit, making a total of more than 40,000,000 pieces handled, which include almost 300,000 parcels received, 150,000 dispatched, and a like number in transit. Money orders are issued to the equivalent of almost $800,000 United States currency and cashed to the value of more than $1,000,000.

Foreign post offices are maintained at Chefoo as follows: British, French, Japanese, and Russian (since China's declaration of war against Germany the German post office has been closed).

Foreign post offices have also been maintained at the following cities: British office at Weihaiwei; German offices (before the war) at Tsingtau, Litsun, Sefang, Weihsien, and Tsinan. Japan is operating post offices in the former German sphere of influence.

Postal parcels are accepted for transmission to and from the United States by the Japanese and Chinese post offices, the former offering better facilities.

Money-order facilities with the United States are offered by the Japanese and British post offices.

All foreign post offices, as well as the Chinese post offices, accept mail for the United States.

Under normal conditions first-class mail matter from New York is in transit from 27 to 35 days.

TELEGRAPHS.

The Chinese Telegraph Administration, under the Ministry of Communications, operates extensive land lines throughout Shantung Province, maintaining 81 principal stations and more than 1,700 miles of lines in connection with the Government lines throughout the country. In addition, there is cable communication from Chefoo with Dairen, Tientsin, Weihaiwei, and Shanghai. Tsingtau is connected by cable with Shanghai. There is no wireless telegraph communication.

Telegraphic communication over the Chinese Government lines is limited to China only, the rates in Mexican currency being divided into two zones and the telegrams classed according to the use of a foreign or the Chinese language: Telegrams in foreign language—To all places in the same Province, 9 cents per word; to all other places in China, 18 cents per word; press telegrams (throughout China), 6 cents per word. Telegrams in Chinese—To all places in the same Province, 6 cents per word; to all other places in China, 12 cents per word; press messages (throughout China), 3 cents per word.

The Japanese cable to Dairen (formerly Russian) accepts messages only in the Japanese language. In addition to messages to Dairen the Japanese will take messages for Japan at the rate of 30 sen ($0.15 United States currency) per word, which is considerably cheaper than other means of cable communication with that country. By arrangement with the Chinese Government the above-mentioned line is used by the latter for a certain number of hours each day for the transmission of government and private messages.

The Great Northern Telegraph Co. and the Eastern Extension Telegraph Co., operating as the Submarine Telegraph Service, maintain offices in Chefoo and operate the Chinese Government-owned cables to Shanghai and Tientsin (two cables), with connections abroad. They also operate the British-owned cable from Chefoo to Weihaiwei.

The rates charged by this company vary greatly according to the class of telegram and the route, as well as the exact point of destination in the different foreign countries. Direct telegrams to the United States vary from $1.45 Mex.[1] for the Pacific coast to $1.60 Mex. for New York per word. Ordinary messages via Europe would be $0.55 Mex. higher to New York and $0.90 Mex. higher to the Pacific coast. Deferred telegrams by the latter route are, roughly, half the above charges.

Messages are also accepted by this company for Weihaiwei at $0.09 Mex. per word and to other places in China from $0.18 to $0.45 Mex.

The cable from Chefoo to Dairen was laid by the Russian Government from Chefoo to Port Arthur and became the property of the Japanese Government after the Russo-Japanese War, when the terminus was changed.

The cables from Chefoo to Tsingtau and from Tsingtau to Shanghai were laid by the Kiaochow (German) government. The former line was cut during the siege operations against Tsingtau in 1914, and the cable has never been repaired and operated since.

There are no direct cable communications with the United States, and no extensions to the present facilities are contemplated.

TELEPHONES.

Telephone services are maintained in Tsinan and Chefoo and owned and operated by the Chinese Government. More than 500 telephones are in operation in Tsinan and more than 400 in Chefoo (see Tsingtau report, p. 616, for telephones in that city).

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[1] See footnote on p. 84.

American telephone equipment is in use in Tsinan, and an American company has concluded an agreement with the authorities for the supply of all further materials needed for extension. The installation charge in Tsinan is $15 Mex., with a rental charge of $5 Mex. per month. The common battery system is in use.

The original equipment used for the Chefoo installation is the common battery system and was of Norwegian manufacture; all new material used comes from Japan. The installation charge in Chefoo is $10 Mex. and the rental charge $5 Mex. per month. The service is most unsatisfactory, and there is no prospect of improvement or extension.

NEWSPAPERS.

There is one foreign newspaper published in this consular district, known as the Chefoo Daily News, which has been devoted almost entirely to publishing war telegrams and has only a very limited circulation among the foreigners.

In Chefoo the following Chinese papers are published: Chung Shen Pao (The Awakening Bell), Chi Fu Shang Pao (Chefoo Commercial News), and Chi Fu Jih Pao (Chefoo Daily News), the last-named being Japanese owned.

The Chung Shen Pao (The Awakening Bell) is issued daily and has a circulation of about 800. A page advertisement is charged for at the rate of $40 Mex. per month.

The Chi Fu Shang Pao (Chefoo Commercial News) has a daily circulation of about 700. There is no fixed advertising scale, as the rate is governed by the text and is also subject to special arrangement. This paper asks about $100 Mex. for a page advertisement for one month.

The Chi Fu Jih Pao (Chefoo Daily News), although published in Chinese, is a daily paper owned and edited by Japanese, with a circulation of about 1,000. The charge for a full-page monthly advertisement is $80 Mex.

The principal newspaper of Tsinan is the Shantung Jih Pao (Shantung Daily News). The advertising rates of the paper are $2.90 Mex. per English inch per month, with 10 per cent discount for 6 months' insertion and 20 per cent discount for 12 months' insertion. The ordinary method, however, for charging for advertisements is that of a fixed price per Chinese character of a given size per monthly insertion, as, for example, "No. 4 characters" are printed for $0.003 Mex. per character per month. The daily circulation is estimated at about 2,000.

The percentage of Chinese able to read may be estimated roughly at 3 or 4 per cent of the entire population of Shantung.

PUBLIC WORKS AND SANITATION.

The only undertaking of consequence in the nature of public works is the construction of a breakwater and harbor works at Chefoo. The plans for the construction of the breakwater were concluded in 1914, actual work began in August, 1915, and it is planned to complete the work by the winter of 1920. The plan is to construct an outer breakwater at the eastern end of the harbor, with a passage between the breakwater and Tower Hill, and a mole at the western end of the harbor running from the shore in the direction of the northern end of the breakwater and having a quay wall at its northern end, the space between forming the northern entrance. Upon completion of this work the shelter formed by the breakwater and the mole will be dredged.

The funds for the construction of the breakwater, which will probably exceed 3,000,000 Haikwan taels (at present exchange over $3,000,000 United States currency), were derived mainly from grants from the Chinese Government, monthly loans from the surplus customs revenue of the Maritime Customs, overdrafts from the Russo-Asiatic Bank, and a surtax of 6½ per cent on the amount of import and export duties paid on goods passing through the Chefoo customs.

The construction of the breakwater has been undertaken by the Netherland Harbor Works Co. The breakwater will be about 2,600 feet in length and the mole about 6,000 feet with an additional 600 feet of quay wall at the northern end.

Facilities will be provided for unloading ships at the mole and rails will be laid to the shore which can eventually be connected with the proposed railway from Chefoo to Weihsien should the line ever be constructed.

An American company (the Siems-Carey Co.), operating in conjunction with Japanese, is at present making plans for the reclamation of that part of the Grand Canal in this Province, but the details and the extent of the undertaking have not been made public and only preliminary surveys have been started.

In Chinese cities municipal affairs are under the direct control of the territorial official who appoints headmen for the villages and in larger cities a headman for each section. Where there is a chamber of commerce the headmen cooperate with it in the direction of municipal control. These headmen are usually the oldest or the most prominent and wealthy residents of the village or section and consequently are men of influence with their neighbors. The construction, repair, and cleaning of streets, as well as lighting, are under their general direction and regulations drawn up by them and approved by the territorial official are enforced by the police. A system so loosely organized almost always leads to lax control; there is usually no fire protection, and little attention is paid to the disposal of sewage. Surface wells obviate the necessity for municipal water supply. In all but the largest cities such conditions prevail, and there seems little or no prospect for improvements until some time far in the future.

In Chefoo a section of the city has been set aside for foreign residence, and an informal international committee composed of foreign and Chinese residents of the section, in equal proportion, cares for municipal requirements. The section is policed by the regular Chinese police of the city, but the maintenance of streets and drains, lighting, and fire protection are provided for and under the control of the international committee. The members of the committee are elected annually and serve gratuitously, and funds for municipal expenses are obtained by voluntary contributions from the residents of this section, both Chinese and foreign. The streets are well lighted by electricity and well kept, macadamized roads lead to all parts of the section, and a "Bund" has been constructed along the water front of this part of the town, affording a wide road.

The possibility of building municipal waterworks for Chefoo was considered a few years ago, but the undertaking was abandoned because of the high cost of construction. Under more normal conditions this matter may be revived and in the meantime the sole source of water supply for the entire city is from surface wells.

Tsinan, the capital of Shantung Province, comprises the walled city as well as a large area of land to the west which is the treaty port intended for foreign business and residence. The latter part of the city has been laid out in wide macadamized roads, is lighted by electricity and well policed, and many foreign buildings have been erected. The city is progressive. In the development of the Province the growth of Tsinan is assured, and it promises to become one of the most important trade centers of China.

PUBLIC-SERVICE COMPANIES.

Electric lighting and power plants are operated in Tsinan and Chefoo.

The plant at Tsinan is owned and operated by the Shantung Electric Light Co., using a 110-volt alternating current. The company is a privately owned Chinese concern with a German manager. The original materials used were of German manufacture, but at present Japanese-made materials have supplanted the former. There is an installation charge of $5.50 Mex. per light. The tariff is $0.35 Mex. per kilowatt hour or without a meter $1.60 Mex. per 25-candlepower light. It is expected that when normal conditions prevail the charges will be considerably reduced.

The plant in Chefoo is owned and operated by the Chefoo Electric Lighting Co., a Chinese concern under Japanese technical management. The machinery and materials are all of Japanese manufacture, and recently additions of American machinery were made to the plant, which is now satisfactorily operated. Because of its limited capacity, however, current is supplied only from twilight to sunrise.

Two systems of charges are in effect. The first provides for a fixed price per lamp according to the candlepower, as follows: 5 candlepower, $0.60 Mex. per lamp per month; 10 candlepower, $0.90 Mex.; 16 candlepower, $1.20 Mex.; 25 candlepower, $1.60 Mex.; 50 candlepower, $2.50 Mex., 100 candlepower, $4 Mex.; 200 candlepower, $7 Mex.; 400 candlepower, $12 Mex.; 1,000 candlepower, $20 Mex. With a meter, with a minimum of 30 lamps, the charge is $0.35 Mex. per kilowatt hour, with a minimum charge per lamp per month of $0.50 Mex., irrespective of candlepower and whether or not lights are used. Additional installation charges are made, the company supplying and owning the materials. The above only includes common installations, and better-grade installations and materials must be purchased outright by the consumer. The installation charge for private houses has been undergoing revision, and it is anticipated that new contracts will be made on a higher tariff, as the demand is greater than the capacity of the present plant and will soon absorb the additional power from the planned extensions.

The demand for electric lighting and power has increased in Chefoo to such an extent that the lighting company has been obliged to plan considerable extensions to its plant and for this purpose has purchased new machinery in the United States, which has recently been installed. It is the intention of the company to supply continuous current day and night; it is reasonable to presume that this will lead to increased use of electric power for industrial purposes and, as a consequence, further additions to the plant are certain to be urgently required in the course of a few years.

TREATY PORTS AND FOREIGN CONCESSIONS.

There are three open ports in Shantung Province, Chefoo, Lungkow, and Kiaochow, the last-named being considered in a separate chapter. Four other cities have been opened to trade—Chowtsun, Tsinan, Weihsien, and Weihaiwei.

CHEFOO.

Chefoo has a population variously estimated from 55,000 to 75,000, but in the absence of a definite census it is impossible to give accurate figures; 75,000 is the locally accepted number, but as a considerable portion of the population is floating it is possible that at times it is as low as 55,000. The city covers an area of about 12 square miles, is under the direct administration of a Chinese territorial official (taoyin), and is policed by a Chinese police force. A section of the town has been set aside mainly for foreign residences and business purposes, and although this is directly under Chinese administration and police control such municipal matters as roads, lighting, drainage, sanitation, and fire protection are in the hands of an international committee composed equally of foreigners and Chinese.

At Chefoo there is an American consulate, a British consulate, a Japanese consulate, and a Russian vice consulate. In addition there is an honorary acting consul for the Netherlands and honorary acting vice consuls for Sweden and Norway.

Since China's declaration of war against Germany and Austria-Hungary the consulate of the former and the honorary vice consulate of the latter has been closed.

Chefoo was opened as a port in March, 1862, under the treaty of 1858 with Great Britain. Because of its location on the northern coast of Shantung Province it is off the main trade routes and is served by coasting vessels. Since it has no rail or water communication with the interior and is served by roads in poor condition, there are many handicaps to trade development. The exposed position of the harbor and the frequent severe storms along this coast have proved a serious problem which it is believed will be fully overcome upon the completion of the breakwater and harbor works now under construction. Chefoo is an outport of the larger neighboring ports, principally Shanghai, and much of the trade of the city and the region which it serves is carried on through that port. Japan enjoys a naturally favorable position in regard to the trade of this part of China, and the convenient steamship connections from Chefoo either directly to Japan or to Dairen and Chosen enable that country to control a growing share in the trade of the port.

LUNGKOW.

Lungkow was opened by the Chinese Government as an open port of China in November, 1915, as a result of the desires of the Japanese, the port having been used by them for the landing of their army in preparation for the attack on Tsingtau. For some time after the fall of Tsingtau the Japanese showed considerable interest in the port of Lungkow, but this has to a great extent waned. The port would require permanent rail connections with the Shantung Railway and extensive harbor improvements before it could attain commercial importance. It is located on the north coast of Shantung Province, about 76 miles by sea west of Chefoo. The present population of Lungkow is about 4,000, and its future growth depends entirely upon the solution of Shantung's political problems. The building of the town is under the control of a special Chinese administration, and the streets have been mapped out and portions of the property sold for residential and business purposes, but little construction has taken place. There are no consular representatives at Lungkow and as its commercial activity is confined almost entirely to passenger traffic (coolie emigration) to Manchuria via Dairen and Newchwang and the importation of produce of Chinese origin, mainly from Manchuria, little attention need be given to its present trade. Japan has a decidedly favorable position in regard to the trade of the port and is so situated as to be able to derive full benefit from any future development. The Maritime Customs maintains a customhouse there.

Kiaochow was leased to Germany for a period of 99 years by an agreement signed March 6, 1898, as a result of Germany's seizing Kiaochow Bay on November 14, 1897, using as a pretext the murder of two German missionaries. Tsingtau, the port of the leased territory, is the most promising seaport of Shantung Province and, as a result of the military operations of November, 1914, is now under Japanese control. The Maritime Customs maintain a customhouse at Tsingtau (see special chapter on Tsingtau).

TSINAN.

Of the ports open to trade, Tsinan, the capital of Shantung, is the most important commercial center in the Province and is the second most important city in North China. Its earlier growth was due to its favorable central position within a few miles of the Yellow River, its water communication with the Grand Canal and with the Gulf of Chihli, and the various important producing centers in its neighborhood. Its later development is due to the construction of the northern section of the Tientsin-Pukow Railway, passing through Tsinan, and the railway from the important seaport of Tsingtau to Tsinan, connecting with the first-mentioned line. Since becoming a railway junction the place has grown greatly. By imperial decree of 1904 Tsinan was opened to foreign trade. The present estimated population is about 300,000. The city consists of the old Chinese city within walls, which covers a considerable area, and a new district outside the walls, usually referred to as "the Settlement," which has been set aside for foreign residence and trade. The city is under Chinese administration and police control.

British and Japanese consulates have been established for some years, and an American consulate has recently been opened. The German consulate was closed on China's declaration of war against Germany.

A deep waterway to the sea, to enable coasting vessels to proceed direct to Tsinan, and the completion of the various proposed railway additions which would directly and indirectly benefit the trade of the city would make Shantung's capital a commercial center second to none in North China provided no restrictions were placed upon its normal development. At present Japan enjoys a very strong position in that locality in consequence of the control of the Shantung Railway. As is the case with practically all new enterprises in this Province, the determination of its future political position completely governs, and it is doubtful whether Tsinan will be free to develop along natural lines for many years to come, though its progress will undoubtedly continue.

WEIHSIEN.

Weihsien, another city opened to foreign trade by imperial decree in 1904, enjoys a favorable position on the Shantung Railway about midway between Tsingtau and Tsinan. It has a population of about 100,000 and is the center of many industrial activities. A branch commercial settlement under the control of the Tsinan Commercial Settlement Bureau was established in 1906 but was not developed. There are no foreign consular establishments at Weihsien.

The Japanese, because of their control of the Shantung Railway, enjoy a favorable position in regard to the trade of this important commercial center. For a number of years plans have been discussed for the construction of a railway from Weihsien to Chefoo, but on account of various unfavorable conditions the plans have never advanced beyond the point of discussion. Should this line ever be built, Weihsien, a commercial center that is now declining, will receive a new impetus. The failure of the coal fields in its vicinity considerably lessened the importance of the city.

CHOWTSUN.

Chowtsun was opened by Imperial decree in 1904, but was never actually opened to foreign trade, though in 1906 a branch of the Tsinan Commercial Settlement Bureau was established there. It is estimated to have a population of more than 100,000 and is situated on the Shantung Railway about 50 miles east of Tsinan. There are no foreign consular representatives in this city. The future of its trade is mainly controlled by the Shantung Railway.

WEIHAIWEI.

Weihaiwei, situated on the north coast of the extreme eastern promontory of Shantung Province, was leased to Great Britain in 1898 in order to provide the latter with a suitable naval harbor in North China. The leased territory comprises the island of Liukung as well as the smaller islands in the bay and extends along the coast in both directions and inland for a radius of 10 miles with an area of about 285 square miles and an estimated population of 150,000. In addition to the leased territory there is a sphere of influence extending over an area of about 1,500 square miles. Weihaiwei has never been used as a naval base, but, because of its excellent climate, it has been used as a military sanitarium and a summer resort as well as a supply depot. The government is administered by a British commissioner. There are no foreign consulates or Maritime Customs at Weihaiwei, and the port has but little trade.

FINANCE AND BANKING.

CURRENCY.

The actual currency in circulation throughout Shantung Province consists of the old Chinese brass (contents 50 per cent copper) cash. These coins have a square hole in the center and are usually strung like beads, 1,000 constituting a unit. The coin is known as the "chien," and the unit of 1,000 is called a "tiao." In theory 10 of these brass coins equal 1 copper cent, which coin is called "tung tzu." In actual exchange, which fluctuates, 12 of these coins are considered of equal value with the "tung tzu." Ten "tung tzu" in theory equal a 10-cent silver piece, but in this also exchange fluctuations enter and usually 11 copper cents equal a 10-cent piece. There are also 5-cent and 20-cent silver pieces and these, with the 10-cent pieces, are known as "small coin"—"hsiao yang chien." The next larger unit is the silver dollar—"yang chien." In actual exchange about 120 cents in small coin is equal to 1 silver dollar, the latter being known generally as "big money" to distinguish it from small coin. Mexican silver dollars, Hongkong trade dollars, Chinese Yuan and Peiyang dollars constitute the "big dollars" above mentioned, and other silver dollars are at a discount. In many interior places, however, only the Pei Yang, which is minted in Tientsin, is accepted without discount.

A new currency, the coins being decimals of the Yuan silver dollar, is now in circulation. These coins are minted in 50-cent, 20-cent, and 10-cent pieces and are considered as "big money" as distinguished from the fluctuating small coin. They are accepted by the Government offices at their full value, but are not generally so accepted in trade. There is no gold currency in China.

Bank notes are issued by the Bank of China and the Bank of Communications and numerous native banks throughout the Province, usually in denominations of $1, $5, $10, $50, and $100.

The bank notes of the Russo-Asiatic Bank and the Hongkong & Shanghai Banking Corporation, of Shanghai, are accepted at par in Shantung, but notes of other foreign banks are discounted.

Bank notes are also issued by the native banks to represent a string of 1,000 brass cash and also in higher multiples.

The above-described coins and notes enter into ordinary transactions in the Province, but larger transactions are conducted in taels. The tael is not an actual coin but a weight of silver which is constantly fluctuating in comparison with the coins current. There are several different kinds of taels in Shantung Province alone, namely, the Chefoo tael, the Tsinan tael, the Lungchang tael, the Hwa Ping tael, and the Kiaochow tael. These all vary in fineness of silver and fluctuate according to the value of silver as compared with gold.

The tael is theoretically divided as follows:

10 hao=1 cash (li).
10 cash=1 candareen (fen).
10 candareen=1 mace (chien).
10 mace=1 tael (liang).

Different currencies are in use in Tsingtau, which are treated in the chapter on the Tsingtau consular district (see p. 619).

The difficulties encountered in foreign commercial transactions as a result of these varying currencies and units and their constantly changing relationships to each other can be readily appreciated, and though these fluctuations may mean considerable profit to banks and exchange offices they prove to be a serious drain on commerce and will continue to retard the growth of China's foreign trade until a standard currency has been adopted and the old currencies abolished.

BANKS.

The Russo-Asiatic Bank is the only foreign bank having a branch in Chefoo. This bank does a general banking business, including the financing of commercial and other undertakings, the discounting of local bills and foreign exchange, and the receiving of fixed deposits and current accounts. This bank pays no interest on current accounts in dollars, and on tael accounts the rate is 5 candareens per 1,000 taels per month. From 2 to 3 per cent is paid on fixed deposits, either dollars or taels.

Overdrafts are charged for at the rate of 7 per cent per annum, and loans are granted on approved securities at 7 to 8 per cent. Commercial paper is discounted at 8 per cent.

This bank also formerly kept accounts in Russian rubles and specialized in Russian exchange, but since the revolution in Russia and the sensational fall of the value of the ruble such accounts are no longer active and the bank no longer deals in that currency.

The bank notes of the Shanghai branch of this bank are in current use in Chefoo.

The Hongkong & Shanghai Banking Corporation maintains an agency; it does an exchange business, discounts local bills, and grants loans on legitimate commercial transactions but not on real estate. Interest on overdrafts, etc., is charged at the rate of 7 per cent. The notes of the Shanghai branch of this bank are current in Chefoo at par. The Chartered Bank of India, Australia & China also has an agency in Chefoo but is less active; the notes of this bank are not current, being discounted.

The Seiryu Bank, which is a branch of a Japanese bank established in Dairen, conducts a general banking business confined to China and Japan, including Chosen. This bank accepts current accounts on which it pays 1½ per cent interest per annum, payable monthly. On fixed deposits for six months 4 per cent is paid, and 5 per cent is paid on annual fixed deposits. Overdrafts are permitted, when guaranteed by approved securities, at 7 to 8 per cent. Loans are granted on merchandise and real estate, and interest, which is usually 7 or 8 per cent, is fixed by agreement according to the nature of the transaction. No credits are granted on crops. Drafts are issued and bills discounted on the principal cities of Japan, China, and Chosen.

The Bank of China and the Bank of Communications both maintain branches in Chefoo and engage in general banking business confined to China only. These Government banks pay interest on fixed deposits at the rate of 6 per cent per annum and on current accounts 3 per cent per annum credited monthly.

Other Chinese banks are more in the nature of local exchange banks and savings banks. They issue their own bank notes and are controlled by the chamber of commerce. These banks accept deposits at varying rates of interest, which are usually high, and their interest rates on overdrafts and on loans secured against real estate are extremely high. Money is not loaned against crops as security. The main functions of the small Chinese banks are confined to money changing, loans on ample securities at high interest rates, and the acceptance of deposits; they have little or no relation to ordinary commercial transactions. Affairs of that character are conducted directly between buyer and seller, and the financial parts of the transaction are settled in the same manner. Ordinarily the actual transference of money from one city to another in Chinese commerce is unnecessary, as it amounts to involved barter. Local payments are usually made in actual coin on settling days.

The principal Chinese bank operating in Chefoo is the Weihaiwei Agricultural Savings Bank, with head office in Weihaiwei. This bank accepts current accounts and fixed deposits and pays interest on the former at the rate of 3 per cent per annum credited monthly. On fixed deposits 4, 5, and 6 per cent per annum is paid on 3, 6, and 12 months' deposits, respectively. Credits are granted on approved securities, on which eight-tenths of 1 per cent per month is charged as interest. This rate, however, changes according to the transaction and may be considerably higher. Credits are not granted on such securities as crops, though the bank is known as the Agricultural Savings Bank. Its influence is little felt in commerce, as commercial paper is not discounted. Drafts are granted on the principal cities of Shantung Province and on Shanghai and Tientsin.

In Tsinan there are two foreign banks, the Yokohama Specie Bank and the Bank of Chosen (both Japanese).

SITUATION AS REGARDS RUSSIAN RUBLES.

In considering the finances of Shantung Province special attention must be paid to the Russian ruble. For many years Shantung coolies have annually migrated to Siberia and North Manchuria. For their work they received Russian rubles, and it was their practice to return to their homes in Shantung in the late autumn and bring their earnings with them. This money became a necessary part of the income of the people and not only was a great help to them in making necessary foreign purchases but was always relied upon to tide over an emergency and form a reserve. In former normal years the Russian ruble was equivalent to about $1.20 Mex. At the present time the ruble is worth only slightly more than $0.10 Mex. As many millions of rubles are held by the natives of Shantung the importance of this currency in the economic life of the people is manifest. Although rubles are not in circulation as a currency, there are nevertheless special ruble exchanges in the more important financial centers, where several millions of rubles may change hands daily.

MANUFACTURING AND OTHER INDUSTRIES.

Agriculture is one of the main industries of the north-central and western parts of Shantung Province, and, though crops are usually abundant, they are insufficient for the needs of the entire Province and considerable quantities of foodstuffs must be imported. Horticulture, confined mainly to vegetables and fruits, is also an important occupation of the people. Tree grafting was introduced by an American missionary some years ago, with a resulting great improvement in the quality of the fruits through the introduction of foreign strains. In consequence of neglect and an insufficient knowledge of this subject, the quality of the fruits has deteriorated of recent years. Sericulture in a crude way, consisting mainly in the protection of the silkworm and the collection of cocoons, is probably one of the most valuable industries, though not nearly as extensive as conditions would justify. This applies to the silkworm that feeds on the scrub oak leaves and produces the tussah and the silk from which pongees are woven. In the central and southern parts of the Province mulberry trees are grown from slips imported from Kiangsu and Chekiang Provinces. The quality of the mulberry is inferior and only a small quantity of white silk is produced, the bulk of the product being yellow silk. In comparison with the chief silk-producing Provinces of China the total output is small. Great quantities of Manchurian cocoons are imported annually to supply the needs of the local silk filatures. The silkworm in the eastern part of Shantung, as in Manchuria, feeds on the leaves of the scrub oak, and piece goods woven from the silk spun by these worms is known as pongee silk.

STRAW BRAID.

The plaiting of braid from wheat straw, which is a cottage industry in many parts of the Province, is one of the leading industries, occupying a vast number of people and yielding an important revenue. This industry is entirely in the hands of Chinese up to the point of marketing and shipping abroad, and the principal market is the United States.

HAIR NETS.

The hand manufacture of hair nets made from human hair was begun about 10 years ago and has now reached tremendous proportions. This is a home industry, the hair being supplied mainly by the merchants in the treaty ports to the interior villages, where the nets are finished in the homes of the people, collected, and returned in quantities. Although most of the hair used in this industry originated in China, it was, prior to the European war, shipped to Europe to be prepared and returned to Shantung Province for manufacture. Because of conditions resulting from the war, American-prepared hair largely took the place of hair prepared in Europe, and during recent years the industry of preparing hair locally has shown considerable growth. Peroxide of hydrogen, imported from the United States, is used for decoloring the hair. The art is little known in Shantung and the results are not as satisfactory as with foreign prepared hair, though considerable improvements are being noted.

BOBBIN LACE.

The manufacture of bobbin lace by hand is also a very important home industry, and great quantities of this lace are collected either at the treaty ports of the Province or at interior centers for marketing at Shanghai and Tientsin. High-grade English linen and cotton thread has been used in this industry, but in consequence of war conditions supplies have been interrupted, a poorer grade of Japanese thread has been substituted, and the quality has deteriorated. The manufacture of this lace is carried on by women and children.

EGGS AND ALBUMEN.

The egg and albumen industry in Shantung Province is another new industry started within the past decade. The yolks and whites are dried separately and powdered and in this condition, if kept dry, will remain good for an indefinite period. The eggs are collected in the southern part of the Province, and the industry is centered in the neighborhood of Tsinan. The principal consuming market is the United States. From 1,000 eggs approximately 14 pounds of dried yolks and 5½ pounds of albumen can be obtained.

SILK INDUSTRY.

The reeling of silk from Shantung and Manchurian cocoons is the largest and most important single industry of the Province and is centered in Chefoo. The raw silk or "tussah" is produced by killing the chrysalis by dry heat. The cocoon after being stored is softened by steam, and usually 8 cocoons are unreeled at a time to make 1 thread; under favorable conditions 8 cocoons will yield a thread over 1,000 yards in length. A full spindle is then twisted into a hank and marketed under a particular "chop" (trade picture or name). Silk thus reeled in Chefoo is mainly marketed in Shanghai, whence it is sold abroad.

The world-famous pongee silk is made on hand looms in various parts of Shantung Province from silk thread reeled as above described. Gum made from beans is added to stick the threads together, and the pongee is woven on crude native-made hand looms with bamboo teeth. Pongees are woven in a great number of widths and lengths and in various qualities and weights according to the grade of silk used. The finished pongees are further graded according to quality, weave, and color. Although the finished pieces range from a width of 17 to 43 inches—and sometimes on special order to 50 inches—and in length from 16 to 50 yards, with pieces weighing from 21 to 260 ounces, the average sizes are 18 to 20 inches in width and 20 yards in length and 33 inches in width and 20, 30, or 50 yards in length, with a considerable range in weights, usually from 30 to 125 ounces. During the past several years efforts have been made to standardize pongee silks, but, though improvements have been made, little real progress can be noted. The difficulty lies mainly in the fact that there are no large factories, units usually being from two to six looms and in many cases single looms in the homes of the people scattered throughout the far interior.

Although raw silk is marketed in Shanghai, pongees are largely marketed in Chefoo, though considerable quantities enter into the trade of Shanghai, Tientsin, and Tsingtau.

Although the reeling of tussah silk and the manufacture of pongees has been for many years the most important industry in this district, nevertheless, because of easy success and little competition, the filature owners have become overconfident, with the result that they have either failed to note the signs of the times or are indifferent. Whereas formerly there were about five filatures in Antung there are reported to be nearly 60 at present. When it is considered that the Chefoo filatures depend mainly upon the Manchurian cocoons for their silk and that they are under the disadvantage of paying high freight rates to ship the cocoons from the neighborhood of Antung to Chefoo, and in addition must pay customs duty, it will be readily understood that the Japanese have little difficulty in encouraging Chefoo filatures to move to Antung. The industry there, however, has been confined to reeling the silk, which is then mainly shipped to Japan, where it is either sold as raw silk or made into pongees by machinery.

In lighter weights it is better in appearance than the handmade pongees of Shantung but can not be compared for wearing qualities. In price it is at present about the same but undoubtedly will soon be cheaper. It is now largely taking the place of the handmade article in Australia, and an effort is being made to introduce it into the United States. The success of these enterprises will have a very serious economic effect upon this region.

The cocoons produced in this locality, though not great in quantity, are far superior to the Manchurian cocoons. Pongees made by hand from Shantung-produced silks will always bring higher prices, but the quantity produced locally is comparatively so small that the industry can not survive unless immediate steps are taken to increase the local supply. Up to the present time all representations to the filature owners and the officials have been in vain and nothing has been done. There are numerous suitable hillsides now unused where scrub oak could easily be grown and a plentiful supply of cocoons assured, but the owners seem to prefer to take the easier course and move to Antung, apparently forgetting that by so doing they are placing the industry in foreign hands and diverting the trade to Japan, besides abandoning the thousands of Chinese workers in Shantung who depend upon this industry for their livelihood. They have drifted so far with the tide that turning back now will be difficult.

WINE.

Wine is manufactured from the excellent grapes grown in the neighborhood of Chefoo. This industry is one of comparatively recent growth, and with time the quality of the output is improving. Modern methods are employed and the company is both owned and operated by Chinese, the earlier years having been under the direction of an Austrian expert. Native grapes being unsuitable for wine manufacture, American and later Austrian grapes were introduced. The wine is stored in casks, which were specially made in Austria and shipped in sections. Extensive concrete wine cellars below sea level were built. The casks are labelled showing the vintage, and the first wines were sold after the company had been in operation for 10 years.

In connection with the wine industry a special glass factory was built by the company to manufacture wine bottles, but on account of inability to obtain materials the plant was shut down in 1916.

PEANUTS AND OIL.

The growing of peanuts and the extraction of peanut oil is another important industry of the Province. The nuts, both shelled and unshelled, as well as the oil, are mainly marketed through Tsingtau and Tientsin.

COTTON.

The growing of cotton, though limited in area, has reached considerable proportions in the neighborhood of Lintsingchow and, in a lesser degree, Kaotangchow and Hsiatsing, all in the western part of Shantung Province. About half the crop is consumed locally, the remainder being marketed in Tientsin. This business is entirely in the hands of the Chinese.

CATTLE RAISING.

Although cattle are raised in considerable numbers and largely consumed in the Province, there is an important excess for export.

For many years past this Province has supplied the maritime Provinces of Asiatic Russia with beef, and of late years dressed beef has been shipped from Tsingtau to the Philippine Islands. It is a curious fact that, in a country raising cattle as extensively as Shantung, there are no dairy industries.

TOBACCO.

The growing of tobacco suitable for cigarette manufacture has been encouraged by the British-American Tobacco Co., and this industry is making considerable progress.

EXTRACTION OF BEAN OIL.

Shantung Province is the original home of the soya bean and the bean-crushing industry in this part of the world, and until the possibilities of Manchuria were discovered and developed this Province led in the industry. The oil is extracted from soya beans throughout the central part of Shantung Province almost entirely in hand presses and is marketed through Tsingtau and Tientsin. There are more than 10 steam presses in operation in Chefoo and about 40 hand presses. An important by-product of these oil mills is bean cake, of which approximately $1,000,000 worth (United States currency) is exported annually from the Province in addition to the supplying of the extensive local demand for bean cake as a fertilizer and cattle feed.

COLLECTING AND SORTING OF BRISTLES.

The collecting and sorting of hog bristles is confined to the region in the neighborhood of the Shantung Railway. The bristles, after being sorted, are tied in small bundles of uniform length and collected by small dealers in the interior, who in turn sell them to firms in the treaty ports. Eventually practically all the bristles are marketed in Shanghai. The Japanese have shown considerable interest in this industry, exporting via Tsingtau.

MANUFACTURE OF VERMICELLI.

The principal crude native industry is the manufacture of Chinese vermicelli from a small green bean known as the "lu tou." This vermicelli is manufactured not only in large factories but also by individual farmers and in the homes of the natives in all parts of the Province. Where the bean can not be grown it is transported from the bean areas for the manufacture of vermicelli.

The beans are harvested in the early part of September and are separated from the pods by the use of flails on primitive thrashing floors. Winnowing is accomplished by tossing the beans in the air with wooden shovels, the wind carrying off the chaff. By a complicated process of crude manufacture the vermicelli is made. A by-product of vermicelli manufacture is starch.

BRICKS, TILES, EARTHENWARE, AND POTTERY.

Brick making by crude native processes and the manufacture of tiles, earthenware, and pottery are important industries in many parts of the Province where suitable clay is plentiful.

Although many of the industries of this Province are the result of foreign encouragement, instruction, or financing, there are no important foreign industries or manufactures except coal mining and railroad operation.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Chefoo during the years 1904, 1913, and 1918:

Imports and exports.	1904	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$5,473,614	$3,804,685	$7,594,699
From Chinese ports	5,344,129	3,747,283	3,821,371
Total foreign imports	10,817,743	7,551,968	11,416,070
Reexports of foreign goods:			
To foreign countries and Hongkong	70,586	301,570	351,855
To Chinese ports	2,316,883	749,728	4,326,246
Total foreign reexports	2,387,469	1,051,298	4,678,101
Net total foreign imports	8,430,274	6,500,670	6,737,969
Imports of Chinese products	7,634,860	7,607,467	12,119,756
Reexports of Chinese products:			
To foreign countries and Hongkong	153,037	761,323	261,193
To Chinese ports	1,676,543	603,306	1,010,559
Total Chinese reexports	1,829,580	1,364,629	1,271,752
Net total Chinese imports	5,805,280	6,242,838	10,848,004
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	2,451,381	2,666,420	5,241,365
To Chinese ports	5,921,480	7,688,164	13,959,873
Total exports of local origin	8,372,861	10,354,584	19,201,238
Gross value of the trade of the port	26,825,464	25,514,019	42,737,064
Net value of the trade of the port	22,608,415	23,098,092	36,787,211

EXPORT TRADE.

In discussing the exports of the products of Shantung Province it is necessary to take into consideration the various means and points of exit. Prior to the construction of the Shantung Railway, which was opened to traffic in 1904, and the opening of the northern section of the Tientsin-Pukow Railway in 1913, this Province depended mainly upon the port of Chefoo and the inadequate road and waterway transportation of the interior for the exportation of its products. After the building of the Shantung Railway the port of Tsingtau rapidly developed, largely at the expense of Chefoo. Upon the completion of the northern section of the Tientsin-Pukow line two new and extremely important exits for Shantung products were established, and by means of this line Tientsin and Shanghai gained considerably as distributing points for goods from this Province.

Goods leaving the Province via the ports of Chefoo and Tsingtau, as well as the small quantities from Lungkow, come under the observation and control of the Chinese Maritime Customs, but goods that leave the Province by rail and pass into the markets of Tientsin and Shanghai are uncontrolled so far as the customs authorities of Shantung are concerned. No statistics of exports by rail are available, and, as that is a constant and increasing means of export, the figures of the seaports alone can give no accurate idea of the vast and valuable export trade of Shantung Province.

It is an interesting fact that the leading articles of export from this Province are goods either wholly or partly manufactured, the former being of greater importance.

The growth of exports during the past 10 or 12 years has been notable and is almost entirely due to the construction of railways opening up considerable producing areas. The developments along this line, however, have been insufficient, and it will not be possible to take full advantage of the wonderful possibilities of this naturally rich Province until it is thoroughly opened up by rail and the Grand Canal and Yellow River are reclaimed.

The lack of collecting mediums for goods intended for export and the inadequate banking facilities are proving serious handicaps in the extension of all lines of goods suitable for export.

The following table of the principal exports of native products and manufactures through the port of Chefoo, destined for foreign countries, is submitted for consideration in connection with similar tables of exports from Tsingtau, though it should be borne in mind that, as explained above, the exports of these two ports represent only a portion of the total export trade of the Province:

Articles.	1904		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Beans, all kinds.....tons..	8,793	$247,554	455	$11,206	4,721	$5,632
Chinaware.....pounds..	....	....	97,599	5,295	74,133	6,255
Clothing, etc.....	....	324	....	60,562	....	93,017
Cordage, hemp, etc.....tons..	....	....	....	....	19	3,883
Cotton goods:						
Nankeens.....pounds..	....	....	62,533	16,204	9,733	4,832
All other.....	....	....	....	....	....	686
Cotton, raw and wadding.....tons..	11	2,437	....	....	64	28,8 1
Dates, black and red.....do....	2,054	75,627	....	....	118	10,144
Eggs, fresh and preserved.....number..	240,459	1,272	7,896,502	33,302	77,000	9 3
Fishery products.....tons..	912	48,512	1,300	71,798	773	73,688
Fruits, fresh and dried.....do....	346	4,073	2,248	63,805	425	21,4 5
Ginseng.....pounds..	14,472	64,372	....	....	141	6 4
Grasscloth.....tons..	....	....	428	491,969	33	51,506
Groundnuts:						
In shell.....do....	2,309	80,613	3,302	149,620	656	40,529
Kernels.....do....	696	18,664	....	....	1,653	131,350
Hair nets.....	....	....	....	....	....	840,133
Hemp.....do....	....	....	18	2,587	1	252
Hides, cow.....do....	14	3,190	1	478	4	2,236
Lace.....	....	....	....	67,519	....	1,097,653
Leather and leather ware.....do....	....	....	13	6,4 0	1	302
Licorice.....do....	482	41,744	665	59,180	150	19,323
Mats.....pieces..	766	92	104,105	6,340	58,348	5,618
Meats, fresh and frozen.....	....	....	....	....	....	42
Medicines.....tons..	342	57,828	....	48,384	....	96,715
Metals.....do....	....	....	....	44	64	9,369
Oil:						
Bean.....do....	1	106	316	29,210	21	3,888
Groundnut.....do....	1	102	4	650	70	14,223
Sesame seed.....do....	3	426	....	....	7	2,163
Wood.....do....	....	....	....	....	1	450
Paper.....do....	11	2,497	98	12,399	45	11,824
Provisions of all kinds, n. e. s.....	....	328	....	988	....	16,805
Seeds, all kinds.....do....	231	7,696	473	36,039	134	17,036
Silk, raw, wild (filature).....do....	20	65,325	10	30,798	18	104,722
Silk piece goods.....do....	2	11,396	25	110,919	....	5,782
Silk pongees.....pounds.	122,666	195,685	251,333	555,660	643,600	1,691,879
Straw braid.....do....	145,866	57,150	....	....	42,933	81,626
Tea.....do....	....	....	29,333	8,739	11,601	3,150
Timber and wood ware.....	....	....	....	5,128	....	68
Vermicelli.....tons..	5,733	513,099	11,434	1,344,727	5,707	910,113
Walnuts.....pounds..	325,599	6,419	....	....	14,667	950
Postal parcels not otherwise classified.....	....	....	....	15,776	....	9,755
All other articles.....	....	1,097,937	....	186,838	....	83,076
Total.....	....	2,604,418	....	3,427,744	....	5,502,558
Less reexports of goods of Chinese origin.....	....	153,037	....	761,324	....	261,193
Net total.....	....	2,451,381	....	2,666,420	....	5,241,365

The above figures represent exports to foreign countries only and do not show the exports to other Chinese ports, which ordinarily have been about equal in value.

The following table shows the quantity and value of the articles declared at the Chefoo consulate for exportation to the United States during the years 1917 and 1918:

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
Brushes, bristle and horsehair........number..			204	$110
Cages, bird (bamboo)........do....	38	$359		
Hair nets (made of human hair)........gross..	137,408	282,909	211,082	347,545
Hair, yak........pounds..			50	211
Lace and insertions, linen and cotton........yards..	187,337	18,172	45,291	5,318
Lace, silk........do....	161	26		
Lace goods and embroideries........pieces..	13,971	4,092	2,928	1,814
Oil, peanut........gallons..	10,000	10,410	31,000	36,557
Pongee silk, in gum........pounds..	273,253	798,109	180,555	473,732
Rugs, woolen........square yards..	1,260	2,961		
Silk, raw........pounds..			1,918	5,716
Straw braid........do....	150,024	354,083	375,397	719,212
Total........		1,471,121		1,590,215

For purposes of comparison it may be stated that during 1913, the last normal year before the outbreak of the war, the declared exports from Chefoo to the United States were valued as follows: Hair nets, $1,140; lace and lace goods, $3,140; silk, $65,633; walnuts, $2,664; total, $72,577.

IMPORT TRADE.

Changes in trade routes have had a marked effect on the import trade of Chefoo. Since the opening of the Tientsin-Pukow Railway radical changes have occurred in the import routes to the interior of Shantung, the effect being even more marked than that of the operation of the Shantung Railway since 1904.

As with exports, totals for the Province are not ascertainable, since in the case of some commodities the railway entrances into the Province are of greatest importance and statistics covering them are not kept.

Although the revolution in 1911 made some change in the requirements of the people of this Province, particularly as to dress, on the whole the change was slight when the total import trade is considered and when comparisons are made with other parts of China, particularly the Yangtze Valley and the South.

Many factors are of vital importance in connection with the importing power of the people of Shantung, and probably the most important single factor is exchange. With exchange stable both imports and exports flourish. With exchange rising exports suffer, because of the high prices that must be paid in gold-standard countries, and in consequence the buying power of the people is restricted. With exchange falling the reverse situation obtains, to a limited extent, except that the conservative Chinese suspend importing as much as possible with the exchange unfavorable to them and, as most of the imports that are necessary for life come from other parts of China where exchange does not enter into the question, foreign imports might be curtailed for a considerable period without serious inconvenience.

In considering imports reference should be made to the paragraphs of this chapter dealing with shipping facilities, finance and banking, and communications.

In all foreign business, both import and export, the comprador system fully prevails.

The Province of Shantung, so far as foreign imports are concerned, is mainly served through neighboring large commercial centers, such as Shanghai, Hongkong, and Tientsin, the single exception being imports from Japan. Under this system goods packed abroad for shipment into China are usually repacked to meet the varying requirements of the locality of ultimate consumption. Shipments intended for the far interior points of the Province usually require such repacking on account of the methods of inland transportation. In filling the relatively few direct orders detailed packing instructions should be insisted upon, to avoid, so far as possible, additional packing expenses.

It is not considered essential to present a table showing the imports of foreign goods into Chefoo, because, as already indicated, these figures would represent but a small proportion of the total trade of the Province even when examined in conjunction with the import figures of Tsingtau. As previously stated, statistics for the entire Province are unobtainable, since the corresponding figures concerning goods entering and leaving by rail are not available.

The import trade of Chefoo has undergone marked vicissitudes. Prior to the building of the Shantung Railway and the harbor works at Tsingtau, Chefoo enjoyed the undisputed position of the leading port of Shantung Province, and goods destined for the interior or other coast ports depended upon the junk trade or the roads from Chefoo. This condition gradually changed, and with the growth of Tsingtau the trade of Chefoo declined. As, however, the railway created new business, the net result was a gain for the Province as a whole.

Commerce has shifted to more convenient channels and in reality has greatly grown. The opening of the northern section of the Tientsin-Pukow Railway greaty stimulated trade, both import and export. The fall of Tsingtau and the transferring of the former German interests to Japanese control temporarily confused the even flow of commerce, and for a time Chefoo gained in certain lines but, lacking rail communications with the interior, is again losing the advantage.

American exporters have found it difficult or impossible to compete with Japan in cotton piece goods in this part of China, and this item forms a very important part of the imports in which the United States is interested. The trade in 1913 had reached considerable proportions when the opening of the Tientsin-Pukow line afforded a readier entrance for interior trade. The same may be said of practically all the items in Chefoo's import trade that show a serious falling off in recent years. The exception is ginseng, which has grown to be the leading article of import into Chefoo but does not represent an item of local consumption to any considerable extent. Because of the favorable climate in Chefoo, Korean ginseng is imported and stored and the annual reexports to foreign countries almost equal the imports. The main consuming markets are South China (with Hongkong as the distributing point), the Straits Settlements, the Dutch East Indies, and the Philippine Islands. By a special arrangement with the Chinese Maritime Customs foreign ginseng may be imported into Chefoo and stored for a period up to three years and the amount of import duty paid will be refunded if the ginseng is reexported within that time.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

The main seaports of Shantung Province are Chefoo, Tsingtau, Lungkow, and Weihaiwei. Of these Tsingtau is treated in a separate chapter. Chefoo is the best and largest natural harbor in North China but is exposed to the northeast winds, rendering the working of ships impossible during stormy weather, particularly in autumn and winter. This defect is being overcome by the construction of a breakwater which, when completed, promises to make Chefoo harbor safe in any weather. Being an outport Chefoo has no direct shipping facilities with the United States or other important commercial countries. Practically all ocean freights for the United States are subject to transshipment at Shanghai. This is the most direct route, although it involves a longer haul. The route via Dairen and Kobe necessitates double handling, and cargoes are subject to long delays at both ports. From the middle of March to the first of December there are approximately five steamers per week touching at Chefoo en route for Shanghai. During the winter months—from the early part of December to the middle of March—steamship communication with Shanghai is very uncertain, frequently 10 days elapsing without communication. This is mainly due to the fact that, generally speaking, Chefoo is merely a port of call for steamers plying between Shanghai and Tientsin and, as the latter port is closed to ocean shipping on account of ice during the winter months, there is insufficient cargo to justify frequent calls at Chefoo. The completion of the breakwater construction and the building of a railway from Chefoo to the interior would undoubtedly insure regular steamship communication for this port.

Small vessels ply between Chefoo and Dairen about five times a week, and there is one vessel a week to Chemulpo, in Chosen.

The port of Lungkow is in communication by very small steamers with Chefoo about every three days if cargo warrants and weather permits. Occasionally a vessel of the China Merchants Steam Navigation Co. calls at the port for a cargo of vermicelli for Hongkong. In addition to this, small vessels occasionally run between Lungkow and Dairen.

As a result of the war a number of the larger China coast vessels were withdrawn for service in European waters, and, in consequence, the coasting service to Shantung ports was materially reduced.

On through bills of lading transshipment at Shanghai is undertaken by the agents of the trans-Pacific lines, and this also applies to American ports of arrival, enabling such through freight to be forwarded directly to destination without the intervention of forwarding and express companies—though in some instances, where goods are held in storage for considerable periods as a result of congestion, extra charges, which are collected at destination, must be made. All agents of the Canadian Pacific Ocean Service (Ltd.) are also agents for the Dominion Express Co., of Canada. This express company is in a position to handle shipments, though the services of an express or forwarding company are not necessary, as through bills of lading are issued to and from all principal ports.

Because the harbor of Chefoo is exposed to the frequent north and northeast gales, cargo is worked with difficulty in all months except May, June, and July. At other times of the year frequent delays occur and cargo is damaged by heavy seas. Ships are loaded and discharged from and into small lighters with capacities of about 35 tons of 40 cubic feet or 20 tons dead weight. These lighters are propelled by two oars at the stern. Loading is entirely by hand, and cargo arriving is handed from the lighters onto the uncovered customs "jetty," the cargo being protected from the elements by mats only. In winter the inner harbor is frequently filled with ice, rendering the working of cargo impossible. During the stormy months steamship companies hesitate to accept cargo for or from Chefoo, as the exposed position of the port may cause long delays. During heavy weather ships not only abandon their work but must seek shelter in the lee of the Chefoo Bluff, which forms the northern shore of the harbor across from the city of Chefoo. These difficulties will be overcome upon the completion of the Chefoo breakwater and harbor works, and loading will then be possible from alongside the piers built from the mole. Direct charges on steamers visiting the port are as follows:

Harbor surtax for breakwater construction, 2 Haikwan tael cents per net ton (at present exchange a little over 2 cents gold).

Tonnage dues collected every three months at the rate of 4 mace (0.40 Haikwan tael cent) per net ton of the registered tonnage of the vessel.

Extra dues for working cargo at night and on Sundays and holidays: 10 Haikwan taels for permit to work cargo from 6 p. m. to midnight; 20 Haikwan taels for all-night permit, 6 p. m. to 6 a. m.; 20 Haikwan taels for Sunday or holiday permit.

Coolies who load and unload vessels earn a maximum of 40 cents Mex. per day according to the amount of work performed. In calm weather this method of handling cargo is very rapid, and a 2,800-ton steamer can be loaded in 12 hours with light cargo.

FACILITIES FOR TRAVEL.

Hotels in the treaty ports and inland ports open for trade in Shantung Province offer very poor accommodation for one accustomed to modern hotels. The hotels at the treaty ports of Chefoo and Tsingtau and the hotel at Weihaiwei are used mainly by summer visitors who are attracted from other parts of China less favored climatically. Although these hotels are kept open in winter, they enjoy little patronage except from the lattter part of June to the early part of September.

Under the circumstances the rates vary, being high in summer and a little lower in winter. The rates (American plan) charged at the Astor House at Chefoo (the principal hotel in the port) are as follows: Summer rates, per day—Single room, one person, meals included, $6 Mex.; double room, two persons, meals included, $10 Mex. Winter rates, per day—Single room, one person, meals included, $6 Mex.; double room, two persons, meals included, $8 Mex. There are no deductions for longer periods.

At Weihaiwei there is one hotel for foreigners that may be compared with the hotel at Chefoo just mentioned.

There are no hotel accommodations at Lungkow for foreigners.

(For hotel accommodations at Tsingtau see chapter on that city.)

At Tsinan there are two small, poorly equipped foreign hotels, and no hotel accommodations at the other inland ports that are open to trade.

The best seasons of the year for visiting interior points of Shantung Province are spring and autumn, and in addition to these seasons the summer is most favorable for visits to the treaty ports and Weihaiwei. For tourists the summer season is recommended for the seaports in preference to either spring or autumn, as the sea bathing is excellent and the summer climate along the seacoast of Shantung Province is better than in any other part of China.

The treaty ports and inland ports open to trade offer no special attraction to sightseers, and the only important points of interest in Shantung Province for tourists are the grave of Confucius and the sacred mountain of Taishan. Confucius was buried at his birthplace at Kufu, near Yenchow, in the year 478 B. C. All the lineal descendants of Confucius are buried at this place and the seventy-fifth lineal descendant resides there now.

In the spring of each year hundreds of thousands of pilgrims from all parts of China visit the sacred mountain of Taishan, and this is a special point of interest to tourists by reason of its temples and scenic beauty. There are, however, no hotels for foreigners at these points, but as they are within a short distance of the Tientsin-Pukow Railway, and consequently not far from Tsinan, it is possible for energetic tourists to see them.

It is not advisable to visit Shantung Province in winter because of the severity of the climate and the almost constant storms along the coasts.

Steamship communication is infrequent and irregular, and the small coasting vessels plying between Shantung ports offer no conveniences. With the exception of the Shantung Railway and the Tientsin-Pukow line interior travel offers many hardships and inconveniences in any season of the year.

TRADE ORGANIZATIONS IN DISTRICT.

In Chefoo there are two foreign chambers of commerce, namely, the Chefoo General Chamber of Commerce, which is international, and the British Chamber of Commerce.

There are three main Chinese Chambers of Commerce in the Province—at Tsinan, Chefoo, and Tsingtau—with more than 30 branches in the principal trade centers.

Separate guilds exist for practically every trade and occupation; they are generally local in character and are not connected with guilds engaged in other lines, though in important matters they may cooperate. In some instances the more important guilds have headquarters in the main centers of trade, with branches in places of lesser importance. The guilds are permanent organizations with elected officers. They concern themselves mainly with the commercial interests, individual and collective, of their members and, in addition, settle trade disputes, enact trade regulations, and perform many municipal functions. In some places they establish standards of weights and measures, fix the rates of commissions, determine settling days, and generally see that business is honestly conducted. In conjunction with chambers of commerce the cooperating guilds exert a powerful influence in the commercial, political, and social life of a Chinese community.

AMERICAN INTERESTS.

Direct American interests in Shantung are relatively small, except for the Standard Oil Co. and missionary interests.

The extraordinary possibilities of the Province are gradually attracting the attention of American business men, and there is no doubt that when the latter are fully awake to the magnitude of the trade they will appreciate the desirability of directly entering the market. A large American import and export firm recently opened a branch in Tsinan and the Singer Sewing Machine Co. is represented by native agencies in all the important communities of the Province. The organization of the Standard Oil Co. is most complete. For its purposes the Province has been divided into districts, and branches have been established at Tsinan, Tsingtau, and Chefoo, with native agencies in every large and small commercial center, forming a complete network covering the Province.

There are nine American missionary societies, including the Young Men's Christian Association, represented in the Province, with 218 American workers as compared with 190 foreign workers in all the foreign Protestant missionary societies. In addition, there are 135 Catholic priests and 58 nuns stationed in different parts of the Province. For administrative purposes the Catholic missions have divided the Province into three sections: North Shantung, with Tsinan as headquarters, and East Shantung, with Chefoo as headquarters, are under the control of the Franciscans, while South Shantung, with Yenchow as headquarters, is under the control of the German missions.

The American missionary societies represented in this Province are engaged extensively in medical and educational work in addition to their evangelistic work. The larger hospitals under their control enjoy the reputation of being among the most up-to-date in equipment and best conducted in China.

The educational work ranges from kindergartens through lower and higher elementary schools and middle schools to the Shantung Christian University in Tsinan, which is conducted jointly by the American and British missionary societies (see p. 455).

There are few Americans engaged in purely commercial undertakings as compared with the nationals of the other leading commercial countries of the world. A number of Americans are occupied in connection with the growing and purchasing of tobacco for the British-American Tobacco Co. and make their headquarters at Erhshihlipu Station on the Shantung Railway, near Weihsien, and also at Fangtze, on the same line.

As a result of the conditions growing out of the European war American trade with this district has greatly increased. This is mainly due to goods from Europe being either entirely cut off or greatly reduced in quantity, the difficulties of shipping, and the uncertainties in connection with the filling of orders. Although Japan has secured the bulk of this demand, a considerable proportion is being met by the introduction of American goods. Up to the present time this has been the result of the pressing need rather than of efforts on the part of American manufacturers and exporters to enter the field, and nearly all the American goods sold in the Chefoo consular district have come from Shanghai and Hongkong.

The establishment of branches of a strong American general importing and exporting concern, with headquarters at Shanghai, in the principal trade centers of Shantung Province (Tsinan, Chefoo, and Tsingtau), with native connections throughout the Province, is essential to the obtaining of a firm future position in the rich trade of this district. Practically all the native products of Shantung Province are in strong demand in the United States, and a firm so established would be in a most favorable position to collect and sell these products in the United States and at the same time to meet the constant and growing demand for American manufactured goods throughout this Province. Until the establishment of such direct commercial control the trade between Shantung Province and the United States will continue to be mainly conducted by foreign firms acting as middlemen.

GENERAL TRADE SUGGESTIONS.

As the customs statistics of Chefoo and Tsingtau fail to portray adequately the trade of the Province as a whole, so also do they fail to indicate fully the lines of American manufacture or origin in greatest demand or capable of greatest expansion in Shantung. The reason for this is that the classification is not sufficiently detailed and that the country of origin is not indicated.

As already indicated, the greatest obstacle in the way of developing American trade in the Province is the lack of American commercial representation there. With the exception of two or three firms that are energetically developing their own lines, American exporters and manufacturers leave to chance, to a great extent, the growth of their business in this region. The great majority obtain lists of names of dealers and then content themselves with soliciting orders by mail, frequently accompanying their letters with more or less useful catalogues and occasionally sending price lists. Their terms amount to cash with order, and when nothing develops they conclude that the field is not worth working.

The more progressive firms that are not in a financial position to do the necessary pioneer work have, during the past several years, placed agencies or established selling arrangements with some firm in Shanghai in a position to carry stocks of staple articles and promptly meet the requirements of outport and interior demand. Frequently they are also in a position to give firm quotations for goods not carried in stock. Such arrangements are, unfortunately, few in number. The firms that have made a real success have directly entered the market themselves and, by establishing a main office (usually at Shanghai), branches at the most promising treaty or open ports, and native agencies at prominent trade centers, have been following the logical method for creating permanent markets in China.

In most instances, however, pre-war methods are being continued and many promising agencies are allowed to languish in foreign hands while foreign competing lines are energetically handled with great success.

In considering the possibility of selling American goods in Shantung Province one important fact should be borne in mind, and that is that the United States purchases a large percentage of the partly or wholly manufactured foreign exports of the Province, which annually total a considerable sum. These goods are mainly bought through foreign firms in the treaty ports that have had the foresight to establish themselves for that purpose. These firms purchase Shantung products to sell to America and purchase non-American products to sell to the natives of the Province. Obviously a strong importing and exporting house, with the necessary financial backing and connections and with competent men in charge of the main departments, would be in a position not only to supply the United States with the required Shantung products but also to sell directly to the Chinese through native agencies located in the main trade centers. This would practically amount to barter, and the profits to the concern undertaking the business (profits that now go abroad and that amount to considerable sums) would remain in American hands. In addition, American goods would be in a most favorable position in the Province. That the direct marketing of American goods pays in China has been amply demonstrated, and if, in addition to selling, a firm is in a position to buy, there is every inducement for the Chinese to deal with that concern.

The lack of jobbers and wholesalers in this district who are in a position to carry stocks makes it extremely difficult for American merchants to place their goods before Shantung buyers. At present the Standard Oil Co. is about the only concern importing goods directly from the United States. In other places where American goods are on sale one finds that they are supplied from Shanghai or Hongkong or some such large neighboring trade center and, after passing through several hands, finally reach the market. Naturally, under such circumstances, the price has greatly increased and great difficulty is experienced in trying to meet competition.

The past four years have been most favorable for the introduction of American goods. The former sources of supply of foreign articles have either been cut off or the production seriously curtailed, and in daily greater degree China has looked to Japan and the United States for many necessities. The former country has many natural advantages and because of the energy of its people is proving a serious competitor. The trade that has gone to the United States has in the main been in lines that Japan could not supply and is not noticeably due to the enterprise of American exporters. While it is true that a number of American firms have established branches in Shanghai, their activities have seldom been directed toward trade through other treaty ports with the vast interior. In this respect they have made but one short step to overcome pre-war handicaps, since, to reach the actual consuming markets, they are still mainly dependent upon foreign firms just as they were formerly dependent upon foreign firms to introduce American goods into the Shanghai market. Many lines of American exports are finding a ready sale in China to-day as substitutes for goods that are no longer procurable. Whether or not their sale is to continue upon the reestablishment of normal conditions depends mainly upon the American exporter's seizing the present favorable moment to market his own goods not alone in Shanghai but also in the Provinces where the goods are actually used.

CHUNGKING CONSULAR DISTRICT.

By Consul M. S. Myers.

LOCATION AND AREA.

The Chungking consular district comprises the Province of Szechwan and Tibet except the Kokonor region. As these two regions are so different and as the latter is relatively unknown, it will be dealt with separately.

Szechwan is one of China's western Provinces and lies between latitude 26° and 34° north and longitude 98° and 110° east. Its latitude corresponds to that of Texas. It is bordered on the north by the Provinces of Kansu and Shensi, on the east by Hupeh and Hunan, on the south by Kweichow and Yunnan, and on the west by Tibet.

This Province is the largest in China. Its area is 218,533 square miles, or nearly four and a half times the size of the State of New York. Texas, with its area of 265,896 square miles, is the only American State that is larger.

POPULATION.

As elsewhere in China, no reliable census has ever been taken. The population is variously estimated at between 45,000,000 and 71,248,600, the latter being the estimate of the Maritime Customs. Richard gives the population as 68,724,800, but considers this figure too high. This population is confined almost entirely to eastern Szechwan, or, roughly, that part of the Province east of the Min River, which comprises less than half of the total area, or about 100,000 square miles. As 50,000,000 may be considered a conservative estimate of the population of this part of the Province, its density may be regarded as approximately 500 persons to the square mile. This figure is exceeded by several other Provinces. The population of western Szechwan is very sparse and comprises aborigines, such as Tibetans, Lolos, and others, among which are independent tribes, as well as Chinese. The Chinese are found mostly in the towns, where they are either in official employment or engaged in trade.

PHYSICAL FEATURES.

Szechwan is mountainous and hilly. From the Min River west to the borders of Tibet there is a succession of mountain ranges running north and south—separated by deep gorges—which at many places reach a height of 16,000 to 19,000 feet. In eastern Szechwan hills and mountains are numerous, but in no case do they reach a great height. Running east and west on its northern border is a range that reaches a height of 8,000 feet but the mountains to the east and south are not so high. Inclosed within these mountains, which form its rim, is a table-land of red sandstone commonly called the "Red Basin." The Chengtu plain is the only important plain.

As described by Richthofen, the limits of the "Red Basin" roughly correspond with those of eastern Szechwan.

The principal river of this district and, in fact, of China is the Yangtze. From its source in the Kokonor, or Ching Hai, the general direction of its course is south until latitude 26.5° north, in Yunnan Province, is reached, whence its general direction is east. In its upper reaches it is known as the "River of Golden Sand," and its western watershed marks the western boundary of Szechwan. Its important affluents in this Province, beginning in the west, are the Yalung, Min, Lu, and Chialing Rivers, flowing south, and the Kung Tan River, flowing north. The affluents that flow south have many tributaries, the more important of which will be mentioned under "Waterways."

CLIMATE.

In mountainous western Szechwan, generally speaking, the climate is dry, and the winters are cold and the summers warm. The climate is considered healthful. In eastern Szechwan, except in the mountainous rim of the "Red Basin," the climate is mild. The changes in temperature are rapid, fogs are of frequent occurrence, and the sky is usually overcast. The rainy season occurs during the summer, when the humidity is the highest. At Chengtu the temperature in summer rarely exceeds 100° F. in the shade, and in winter there is only a short period when the mercury drops below freezing.

Along the Yangtze River the climate is semitropical. At Chungking the extremes of temperature are, of an average year, about 35° and 106° F. in winter and summer, respectively. The average winter mean temperature ranges between 46° and 53° F. The summers are hot and, because of the extreme humidity, are very trying. Fortunately the foreign population can escape to the near-by hills and obtain some relief from the heat. In spring and autumn sudden and marked changes are frequent. During the autumn and winter months the sun rarely makes its appearance through the bluish-gray atmosphere that obscures the sky. The average annual rainfall is about 50 inches. From April to October is the season of greatest rainfall.

POLITICAL SUBDIVISIONS.

The hsien or district is the fundamental subdivision of the Province. There are 141 hsien in Szechwan. Each hsien is presided over by a chih shih or magistrate. He is the authority who comes in contact with the people. His powers are comprehensive and his duties manifold, the more important being (1) administrative; (2) judicial (in a few important places courts—shen p'an t'ing—have been established and are now responsible for much of the judicial work); (3) supervision of education; (4) preservation of order.

There are four tao or intendencies in the Province. Each tao is presided over by a taoyin or intendant. These are civil officials directly under the governor, the highest civil authority of the Province. Their principal duty is to superintend the many district magistrates within their respective jurisdictions.

There are two other officers of whom mention might be made, though they are not vested with administrative powers. They are the commissioner for foreign affairs at Chungking, who is also superintendent of customs, and the special delegate for foreign affairs at

Chengtu. These officers are directly controlled by the Ministry of Foreign Affairs at Peking, but are subject to the supervision of the governor. The superintendent of customs, in respect to his duties as such, is directly under the Shui Wu Ch'u, at Peking.

EDUCATION.

The years 1905 to 1910 may be regarded as the period of transition from the old educational methods to the new. The change was necessarily slow, for a number of reasons, of which the more important were lack of adequate funds, lack of trained teachers, and the attitude of many officials, which may be attributed in part to the regulation requiring officials of the rank of magistrate and below to take a course in law. By about 1910 schools for the old learning had disappeared.

According to the latest official report on education in Szechwan Province published by the authorities (that for 1914), the total school attendance in the Province in both Government and private schools was 364,205. Of these, 5,739 students were in schools for higher education (mostly law schools), 9,827 in middle schools, 2,031 in industrial schools, and 345,121 in the 10,891 primary schools. Education in the primary grade is to a great extent provided by private schools, but above this grade very largely by the Government.

The chief educational center of the Province is Chengtu, the capital. It has a provincial college, a foreign-language school, a normal school, and a technical school, connected with which there are a number of foreign teachers. Of other schools above the middle-school grade there are the Normal School for Girls, the Business School, the School of Law and Politics, the School of Jurisprudence, the School of Sericulture, the Preparatory School for Students Going Abroad, the Girls Industrial School, the Trade School for Girls, and the School for Kindergarten Teachers. The above are Government schools and, in addition, there are several private law schools. There are no native medical schools or hospitals, except, in the case of the latter, military ones.

The educational work of the Protestant missions has been coordinated by the formation of the West China Christian Educational Union, established in 1906. The following missions in Szechwan are members of the Union: American Baptist Foreign Mission Society, Canadian Methodist Mission, China Inland Mission (Eastern and Western Districts), Church Missionary Society, Foreign Christian Mission, Friends' Foreign Mission Association, and Methodist Episcopal Mission. According to the statistical report of the Union for 1915, the missions maintained 444 junior primary schools with 13,997 pupils, 40 senior primary schools with 879 pupils, 12 middle schools with 565 students, 4 colleges with 59 students (the university), and 5 theological and 6 women's training schools having student bodies of 45 and 104, respectively. There are 707 teachers in all grades. The university is situated at Chengtu. A German mission society supports a girls' school at Shunching in which there are about 40 pupils.

The Catholic missions also maintain many elementary schools, there being 350 parish schools in this part of the Province, with more than 6,000 pupils. They have 3 colleges in the Province (2 in Chungking and 1 in Chengtu), 10 seminaries, and 5 boarding schools for girls. Two of the colleges are now closed as a result of the war.

There is only one foreign secular school in the Province. It is the Deutsch-Chinesische Schule at Chengtu, which is now attended by about 80 students. It is of the middle-school grade. There are two German instructors in the school, which, it is understood, has received support from Berlin.

The Protestant missions support 24 hospitals and 34 dispensaries in Szechwan (report of 1915) and the Catholic missions 5 hospitals and 7 dispensaries. The German Government has supported a hospital at Chungking, which has been in charge of an army doctor. The name of this hospital is the Deutsche Poliklinik für Chinesen.

So far no market has existed for modern school supplies and the prospects are not promising.

As regards hospital equipment, a certain amount is in use by the hospitals above mentioned. The supplies and equipment are, generally speaking, obtained either from the home countries supporting the missions or from Shanghai. There is no prospective increase in the demand for such equipment.

AGRICULTURE.

Agriculture is the principal occupation of the people of Szechwan. Rice is the most important crop and is generally cultivated throughout the "Red Basin." The crop year is from April to August. Forty-five bushels per acre from fields continually covered with water is said to be a fair yield. Rice is the chief foodstuff.

Other crops of lesser importance are wheat, rape, beans, sweet potatoes, maize, hemp, tobacco, and sugar cane.

Wheat is one of the principal winter crops, its harvest falling in May. Twenty-five bushels to the acre is claimed to be an ordinary yield, but as much as 50 is harvested. Wheat is exported to other parts of China.

Rape is grown extensively for oil for cooking purposes. It is harvested in May also.

The soya bean is very generally cultivated, chiefly as an article of food. The crop is sown in April and harvested in August. A variety of other beans as winter and summer crops are also grown as articles of diet.

Sweet potatoes are very widely cultivated as an article of food.

Maize is generally cultivated throughout Szechwan. It is planted in April and harvested in June. Forty bushels per acre is regarded as a good yield, but the average is about 30, as the crop is usually raised on poor soil. Maize is grown principally for food purposes.

Hemp, *Cannabis sativa* and *abutilon*, is grown to a large extent. The crop season of the former is February to June and of the latter April to August. The latter is the more largely exported.

Tobacco is a large crop of the Chengtu plain. Tobacco shoots are transplanted in March and the harvest is gathered in June. Tobacco leaves are exported to other Provinces.

Two kinds of sugar cane are grown—the red, for chewing purposes only, and the white or yellow for manufacture into sugar. The cane is ripe in November. Brown and white sugar is exported for consumption in other parts of China.

Among the above products, hemp is the only one that is sent abroad, where it is largely used in the manufacture of carpets.

The most primitive farm implements are used. The water buffalo is the common farm animal. A spade, a sickle, and a one-handled wooden plow with an iron shovel comprise the principal implements in universal use. Night soil is the most common fertilizer; refuse cakes of crushed rapeseed, beans, etc., and crushed animal bones are among the other fertilizers used. The dung of buffalos is generally used for fuel.

Water buffalos and cows for use as beasts of burden are the most common livestock. Ponies are scarce and are used chiefly for riding. Every household has its few pigs which are raised for the market. Goats are also raised in considerable numbers. In western Szechwan and in Tibet grazing is the chief industry of the people, and sheep and goats are found in large numbers. Rabbits are said to be domesticated and raised in northern Szechwan for their skins. Ducks are raised in large numbers for sale to restaurants.

Land holdings are invariably very small. When the farmer needs financial assistance he obtains it by either selling his crop before it is ripe or by borrowing money from his market town, the latter being the more common practice. Throughout Szechwan these towns have frequent market days, on which occasions the farmer takes his produce there for sale.

Silk production is one of the principal and most general industries of this Province. The chief centers of production are the districts of Chengtu, Tungchwan, Kiating, and Paoning. The eggs of the worm are hatched in March, and by the early part of May the silkworm has completed its spinning. There are many schools for instruction in sericulture, and recently more attention has been given to the cultivation of mulberry trees than formerly. Wild silk is also a product of this Province. Silk is the most important export from Chungking.

Other products that enter into the export trade are gallnuts or nutgalls, medicinal herbs, rhubarb, turmeric, vegetable tallow, white wax, and wood oil. The wood-oil tree—t'ung shu—is found more abundantly to the east of Chungking. Wanhsien is the chief center of export. The nuts from which the oil is expressed are gathered in November. The other products are sufficiently touched upon under the heading "Export trade" (p. 506).

In connection with agricultural products, the chief subsidiary employments include the expressing of wood oil and rape oil, the crushing of sugar cane, flour milling, and the manufacture of grass cloth. No modern machinery of any kind, so far as is known, is in use in these industries.

MINERALS AND MINING.

The mineral wealth of Szechwan is confined chiefly to the region west of the Min River. Although this region is very imperfectly known, it is considered to be one of the richest mineral areas in China. Here gold, silver, copper, lead, zinc, coal, iron, antimony, white copper, gypsum, mica, and other minerals are found. The chief mining centers are Yachow, Tachienlu, Ningyuanfu, and Huilichow. Zinc, lead, coal, and iron are important deposits of Yachow, gold and silver of Tachienlu, gold, lead, zinc, etc., of Ningyuanfu, and copper of Huilichow. In Mienning district, near Ningyuanfu, is situated the well-known Maha gold mine. This mine was operated as a joint Government and private undertaking and modern machinery was used, but for some years it has been lying idle. In 1914 it was decided to start operations again and a foreign-educated Chinese mining engineer was given charge of the mine, but before anything was done the plan was given up. Both alluvial and quartz gold is worked in this mineral belt. According to a British consular report, the total gold output of this region is estimated at $225,000 annually.

In the "Red Basin" the principal minerals to be found are coal, iron, and salt. Coal is widely distributed throughout the Province, but in many places it is of a very poor quality. According to Richthofen the districts of Suifu, Yachow, and Chengtu and the northern rim of the basin from Kwanhsien to Kwangyuanhsien "furnish the largest quantity and best descriptions of coal." A very good quality of coal is also mined along the Chialing River. The output of coal in this Province is variously estimated at between 300,000 and 800,000 tons per annum. Iron is also widely distributed and is usually to be found in the coal measures. Chichianghsien is one of the most important iron-ore mining centers. The mining of coal and iron is limited to the demands of the local market.

The principal salt-producing centers are Tzeliuching, Kiatingfu, and Paoningfu. The brine wells of Szechwan are famous, and the production of salt constitutes one of its important industries. Salt in considerable quantities is sent to contiguous Provinces. The primitive methods of raising brine by buffalo winches and bamboo-ribbon rope attached to bamboo buckets still prevail, but at Tzeliuching recent years have witnessed the introduction of simple steam hauling machinery. These plants consist of an ordinary steam winch, the drum of which holds about 3,000 feet of half-inch wire rope. Steam is supplied by a vertical cross-tube type of boiler. These plants are made in Hankow and Shanghai. They are said to be crude and inefficient but have the recommendation of cheapness which appeals so strongly to Chinese buyers. The boring of these wells by the old method of the jumping beam and iron drill is still universally used, but as steam haulage plants are gaining popularity, it may be expected that the need for modern drilling machinery will soon be felt. It may be stated that some of these wells are as much as 3,000 feet deep. In that district natural gas is used as a fuel for evaporation purposes. The number of salt wells in operation at Tzeliuching in 1918 was 1,182, and the salt produced amounted to 3,565,358 piculs, or 212,224 long tons.

Petroleum is found in the salt-well regions, but so far it has not been refined and marketed.

Mining in Szechwan is done entirely by natives and by their primitive methods. Modern machinery is, so far as is known, used only to a limited extent for haulage purposes at Tzuliuching. Foreigners hold no mining concessions nor are they connected in any way with any mining enterprise. Mining affairs are handled by a mining bureau in the governor's office at Chengtu. The official attitude toward foreign investment is not definitely known, but there is no reason to suppose that it would be hostile.

It can readily be seen that the mining potentialities of this Province are vast. Certainly the day will soon come when the Chinese will realize the advantages to be obtained from developing this form of wealth, with which nature has so abundantly furnished them. In conclusion, the principal factors militating against mineral development may be briefly stated, as follows: The present mining regulations, which are regarded as burdensome and a serious obstacle to the growth of this industry; the inaccessibility of this rich mineral area and the serious difficulties of transportation; and the fact that this region is to a great extent inhabited by Tibetan, Lolo, and other tribes who are jealous of encroaching Chinese authority.

WATERWAYS.

In this immense Province, with its millions of people, there is not one mile of railway. By the Yangtze River and its tributaries the principal centers of trade are connected with the outside world. This river is navigable as far as Manyingssu, some 1,800 statute miles from its mouth. Between Ichang and Chungking there are the famous Yangtze gorges. It is this section of the river, with its many dangerous rapids and strong currents, that baffled navigation by steam for many years, and it was only in 1909 that it was demonstrated that steamers of special design and with much power could be successfully operated. Steam navigation is still impossible from December to April during the low-water season, when certain rapids are impassable. At present there are three steamers that have been successfully operated for several years, while several others have recently made their appearance. These steamers have a cargo-carrying capacity ranging between 60 tons in the case of the smallest and 250 tons in the case of the largest, in addition to a passenger load of from 160 to 400, respectively. The journey from Ichang to Chungking, 410 miles, is made in from three and a half to six days, depending upon the steamer and the stage of the water. The down-river trip is made in two days. There are now two small steamers of the launch type plying above Chungking, engaged in the passenger trade.

Cargo between Ichang and Chungking, the commercial emporium of Szechwan, is transported by junk except the comparatively small portion that is carried by the steamers. Junk traffic flourishes in the low and medium water seasons, the current becoming so swift in high water as to greatly increase the cost of the journey as well as the dangers and risks always attending it. For the up-river journey junks are hauled by trackers, and from 30 to 50 days are required to complete it, depending upon the size of the craft, the state of the water, and the winds. "Wu-pans," which are smaller and of slightly different design, make the trip in from 20 days upward. The cost of transportation varies with the cargo. Present rates for up-river cargo range between $20 Mex.[1] and $30 Mex. per ton. The down-river rate is about $12.50 Mex. per ton. Steamer rates also vary and are much higher than junk rates. The down-river journey is made in from nine days to two weeks.

Of the navigable tributaries of the Yangtze, beginning in the west, there is, first, the Min River running south and joining the main stream at Suifu. This river is navigable for junks and shallow-draft steamers below Kiatingfu except in winter and as far as Chengtu for the shallow-draft pan-t'ou ch'uan throughout the year. The Ya River is navigable for rafts between Kiating, where it enters the Min, and Yachow, and it is by that route principally that foreign goods are sent to Yachow and beyond. The Lu River, which enters the "big" river at Luchow, is navigable below Kienchow for native craft. The largest tributary, the Chialing, joins the Yangtze at Chungking. It is navigable for junks below Paoningfu and for small craft as far as Kwangyuanhsien. The Suining River, which joins it at Hochow, is navigable up to Chungpa beyond Mienchow. Another affluent which joins it just above Hochow, the Chu River, is navigable for junks as far as Suitingfu and even farther for smaller craft. The only important tributary of the Yangtze flowing north is the Kungtan River, which joins it at Fuchow. This river is navigable as far as Shihnanfu in Kweichow in high water, but only to the border of the Province at other seasons. Except the two small steamers running between Chungking and Kiating—only to Suifu during low water—native craft of various sizes provide the only means of transportation on these waterways. The up-river journey is in every case long and tedious, the boat being hauled up by trackers, but the return trip is made in comparatively quick time. The trip from Chungking to Chengtu by wu-pan requires about 30 days, while the return journey can be made in a week or 10 days. The present rates for cargo between Chungking and Suifu range between $12.50 and $16 Mex. per ton, and between Chungking and Chengtu they are about $26 Mex. per ton. The distance to Suifu is about 230 and to Chengtu about 420 miles.

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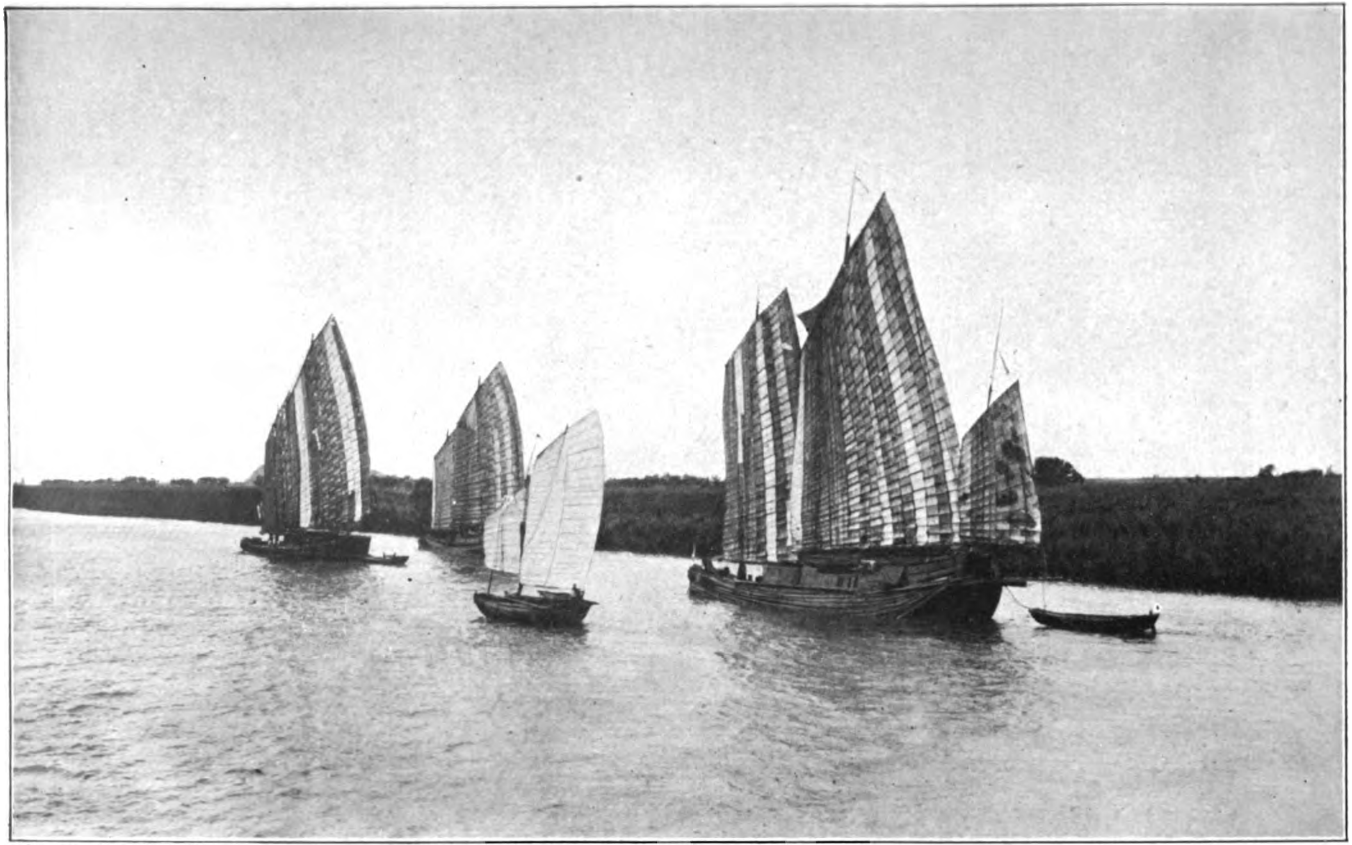
[1] See footnote on p. 84.

The character of the trade on these waterways is limited only by the diversity of the trade of the Province. Besides Chungking other important trade centers situated on these waterways are Chengtu, Kiatingfu, Suifu, Luchow, Hochow, Paoningfu, Wanhsien, and Kweifu.

There are two different taxes levied on goods en route. By the Ch'ang Kuan, or Native Customs, merchandise entering or leaving the Province is taxed unless it is covered by documents issued by the Maritime Customs. This is a specific duty on a nominal basis of 2½ per cent and is collected for the central Government. The other tax, called t'ungchuan, is a provincial tax and is levied at the first barrier that the goods pass. A certificate is given upon payment thereof so as to free the goods from further t'ungchuan levies, but it is understood that these certificates are not always honored. This tax is leviable upon all native and foreign goods not certificated by the Maritime Customs and, according to the regulations governing its collection, upon foreign goods, so certificated, at destination. The practice of collecting it on foreign goods is not uniform, probably because of its evident illegality. This is also a specific tax on a nominal basis of 2½ per cent. At some places lo-ti-shui, a destination tax of variable amount, is also collected.

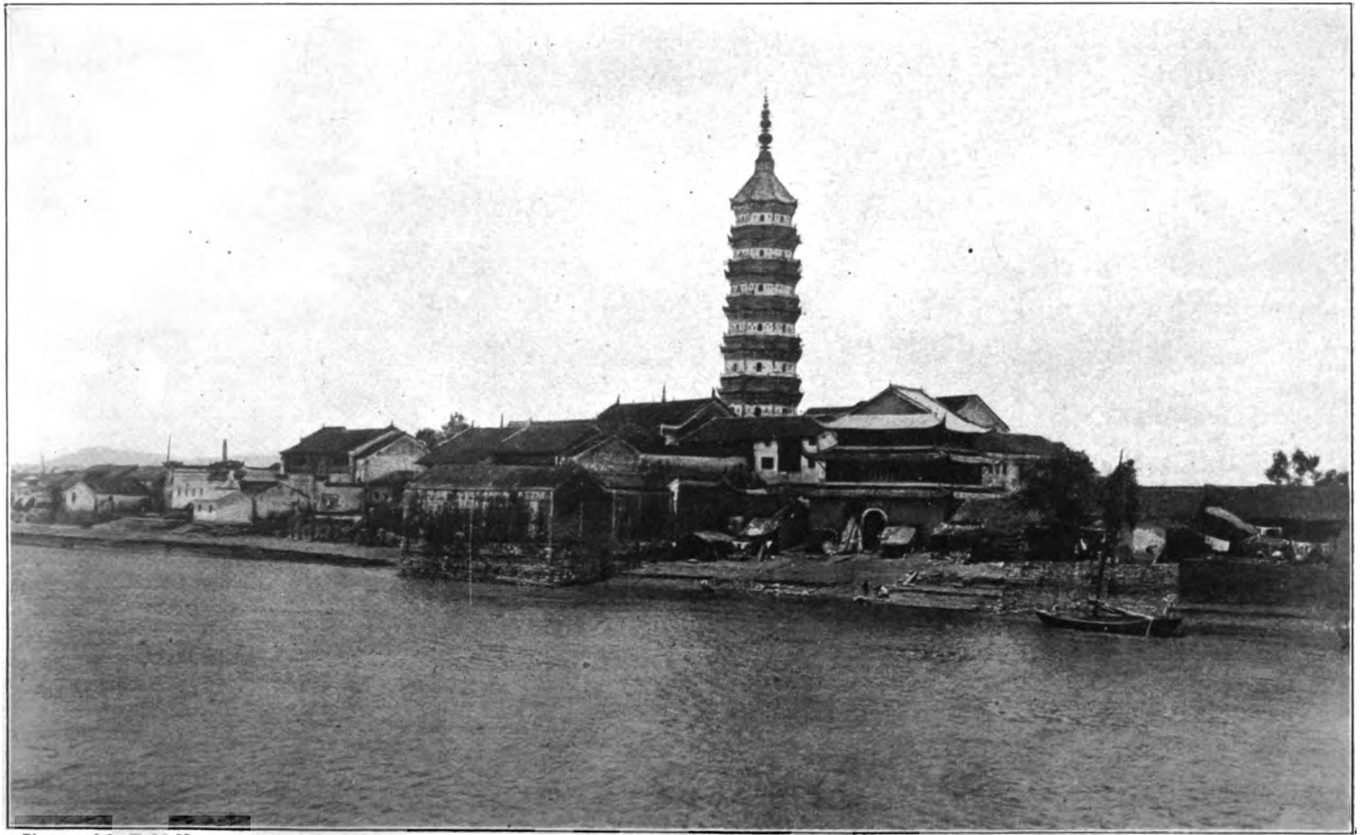
RAILWAYS PLANNED.

There are in Szechwan no railways in operation or under construction. The Szechwan-Hankow and Yamchow-Chungking lines are under agreement for future construction, and there are plans for a line from Yunnan to Suifu or Luchow.



Photograph by E. M. Newman.

FIG. 37.—JUNKS ON YANGTZE RIVER.



Photograph by E. M. Newman.

FIG. 38.—WALLED TOWN, WITH PAGODA, ON YANGTZE RIVER.

SZECHWAN-HANKOW RAILWAY.

The Hukuang Railway loan of 1911, made by the Four Nations Group, composed of American, British, French, and German bankers, provides for the construction of the Szechwan-Hankow Railway. The Ichang-Kweichowfu section, part of which is in Szechwan, was assigned as the American section for construction. The final survey of this line was completed in 1915, but on account of the war construction work was not begun. The length of this section is 132 miles. A preliminary survey of the contemplated extension to Chengtu via Chungking was carried out in 1914 by American engineers from the I-Kwei section.

TATUNG-CHENGTU RAILWAY.

A preliminary contract was signed on August 14, 1913, by representatives of the Société Belge des Chemins de Fer en Chine and the Société Française de Construction et Exploitation de Chemins de Fer en Chine. This railway will be approximately 960 miles long and at Tatung will connect with the Peking-Kalgan Railway.

YAMCHOW-CHUNGKING RAILWAY.

Early in 1914 La Banque Industrielle de Chine entered into an agreement with the Chinese Government for the construction of a railway from Yamchow via Nanning, Pose, and Singyi to Yunnanfu and thence via Weining in Kweichow to Chungking, where it will connect with the extension of the Szechwan-Hankow line. The approximate length of this line is 1,000 miles.

YUNNAN-SZECHWAN RAILWAY.

A survey of the line from Yunnan to Suifu (or Luchow), made by American engineers, was completed in 1911. Its length is about 450 miles. It is undoubtedly this line that is contemplated in the concession of La Banque Industrielle de Chine referred to above.

It will be seen that the above agreements provide for a system of trunk lines in Western China running north and south and another trunk line running east and west paralleling that great artery of commerce, the Yangtze River, and connecting the richest Province in China with the great markets of Hankow and Shanghai. The most urgent and essential line for the needs of this region is very plainly the Hankow-Szechwan Railway.

There are no tramways in the Chungking consular district.

ROADS.

The roads in Szechwan are invariably paved with flagstones, laid crossways. Some important roads are as much as 5 feet wide but usually the roads are narrower. Over the ever-recurring hills in this Province these flagstones are arranged in steps, which, owing to the steep slopes of many hills, make a far more satisfactory road for the traffic than an even-surfaced one. As is to be expected from the nature of the roads, no vehicles are in use. Porterage is the universal means of transportation by land; the trade with Tibet is entirely transported in this way. Pack animals, both ponies and mules, are used to some extent. Transportation by pack animals is slower than by coolies. Traveling is done in sedan chairs, carried by two to four coolies who travel about 30 miles per day.

By reliable "coolie hongs"—establishments providing coolies for labor and transportation purposes—at Chungking, the rate for porterage to Chengtu is now quoted as 10,000 cash, about $6.20 Mex., per coolie carrying a load of 80 catties (about 107 pounds), for the journey, which is 10 days long. At this rate transportation costs about $77 United States currency per ton of 2,240 pounds. The distance is about 300 miles. Chair-bearers receive the same amount. The rate for pack-animal transportation for the same journey is quoted as 90 cash, $0.055 Chungking, per catty (1⅓ pounds avoirdupois), each mule or pony carrying a maximum of 200 catties. At this rate goods are carried the 300 miles for $0.02½ gold per pound or $56 per ton. Transportation rates during recent years have increased considerably. Some hongs quote lower rates, as 9,000 cash per coolie and 80 cash per catty for pack animals, but these establishments are not so reliable and, as a result, difficulties frequently occur on the way. Rates between interior points are undoubtedly less than those quoted herein.

The principal trade routes and routes of travel are the following: (*a*) The "Ta-lu", or Great Road, from Peking via Taiyuanfu, Sianfu, and Hanchungfu, which passes through Paoningfu, Tungchwanfu, Chengtu, Yachow, Tachienlu, Litang, and Batang and thence leads on to Lassa; the section of this road west of Chengtu is the one over which the greater portion of the trade with Tibet is carried. (*b*) The road from Yachow to Yunnan, which passes through the Chienchang Valley and the city of Ningyuanfu. (*c*) The road along the Min River from Chengtu to Suifu. (*d*) The road from Chungking to Chengtu, which passes through Tzechow. (*e*) The road from Chengtu to Wanhsien via Shunchinfu and Suitingfu; this is of considerable commercial significance and will become more important with expansion in the trade of the new port of Wanhsien.

Probably more attention is paid to the upkeep of roads in Szechwan that is usually the case in China. They are generally kept in fair condition and fine bridges are numerous. The district official is responsible for road construction and maintenance, the cost of which is defrayed either by subscriptions of the community or by some public benefactor. The construction of modern roads is not now contemplated, but is a probable future development.

POSTAL FACILITIES.

The Chinese Post Office provides the postal facilities of Szechwan. The report of the Post Office for 1915 gives the total length of postal lines in the Province as 44,108 li, or about 14,700 miles. At the end of that year there were open 113 post offices and suboffices and 523 postal agencies. Mail is carried by courier services, post boats, and steamers. Couriers travel on foot and carry a maximum load of 64 pounds. On most routes they travel day and night with first-class mail. For heavy mail pony pack trains are used to some extent where water transportation is not available.

Since August 1, 1916, when the parcel-post convention between the United States and China went into effect, there have existed parcel-post facilities with the United States. Parcels up to 22 pounds can be sent to Chungking, but for Chengtu and other interior cities the limit is 11 pounds. There are no money-order facilities for foreign countries. The time required for receipt of first-class mail matter at Chungking from New York is between six and seven weeks.

There is one foreign post office in Szechwan, the French Post Office at Chungking. It is neither a parcel-post nor a money-order office.

TELEGRAPHS.

The telegraph service of this Province is furnished by the Chinese Telegraph Administration. There are 36 stations in operation, and lines adding two more are contemplated. There are two lines running east from Chungking into Hupeh Province, two running south into Kweichow Province (one of which is via Luchow), and two to Chengtu, one each via Luchow and Suifu. From Chengtu there is a line running west via Yachow to Batang, with a branch to Ningyuanfu. There is also a line connecting Chengtu with Peking via the Province of Shensi. A line from Hoch'uan (Hochow) to Mienyang (Mienchow) on the Chengtu-Peking line is the one contemplated. Telegraph charges within the Province are at the rate of $0.09 Mex. per word, and to other Provinces $0.18 Mex. per word. The address is charged for.

The materials mostly in use are of German manufacture. Materials are purchased by public tender by the telegraph supply department of the Ministry of Communications at Shanghai.

TELEPHONES.

There are two small official telephone systems in Szechwan. A 50-line exchange for official use only was recently installed at Chungking. The telephones are British Insulated and Helsby Cables Co. The other system is at Chengtu. It is operated by the military authorities, but its use is extended to the public. Part of the system is Swedish-Erricksen. A 200-line exchange of two 100-line Western Electric switchboards was installed in 1913 by Arnhold, Karberg & Co. According to recent reports 343 telephones are now in use. The rate at Chengtu is $5 Mex. per month. At present there is no prospect of extension. The operation of telephones for the use of the general public is a Government enterprise and is reserved to the Ministry of Communications.

NEWSPAPERS.

There are no foreign newspapers printed in Szechwan. Of Chinese journals there are nine printed at Chungking and nine at Chengtu. The following are numbered among the leading newspapers: Chungking—Shang Wu Jih Pao, circulation 600 to 700 copies; Shang Pao, circulation 600 to 700 copies; Chengtu—Kuo Min Kung Pao, circulation about 4,000. The last-mentioned is the only paper printed in this Province that has a daily issue of more than 1,000 copies. All papers have six issues per week. The average annual subscription ranges between $5 and $6 Mex. There are newspapers edited by women at both Chungking and Chengtu; these journals were started during 1916 and are devoted to women's rights and education. At

Chungking the Catholic Mission publishes a weekly paper in Chinese that is not included in the above number.

Advertising rates vary according to the size of the type between 200 and 600 cash for 100 characters, or words, per day. Advertisements by the week, fortnight, and month receive a discount on the above rates of between 10 and 40 per cent, and for longer periods the rates are subject to special arrangement. Double rates are usually charged for outside page advertisements.

Because of the absence of data on the subject, estimates of the percentage of natives able to read vary considerably. According to the opinion of many, less than 5 per cent of the people can read. If the school statistics given above may be considered a reliable guide this estimate is much too high.

PUBLIC WORKS AND SANITATION.

The Chengtu plain, with an area of about 2,400 square miles and a reputed population of 5,000,000, has an irrigation system which, according to Chinese history, dates from the third century before the Christian era. At Kwanhsien the Hsi or Sungpan River debouches from the mountains and divides its waters among the many channels that cross the plain from the northwest to the southeast. Here the streams converge to form the Min River, which empties into the Yangtze at Suifu. These streams have been supplemented by a multitude of canals, whereby an almost perfect distribution of water throughout the whole plain has been effected. Of this system of irrigation Richthofen states that it "is probably not excelled in perfection anywhere."

Certain conservancy work on the Upper Yangtze River with a view to improving navigation is now in progress. In the autumn of 1916, the Ministry of Military Affairs established a bureau for the Szechwan-Hupeh conservancy matters. This bureau has been given a limited amount of money, and thus far its activities have been confined to certain improvement work at several of the worst rapids. Toward the end of 1915 a conservancy board, in which the Maritime Customs was represented, was formed, but thus far it has not functioned. The control of the funds was vested in the Customs. It is possible that this or a similar board may undertake conservancy work later.

There are no foreign settlements in this consular district.

As regards public works and sanitation in the Chinese cities of this Province no advancement is to be noted. The streets are invariably paved with flagstones, are narrow and, with the possible exception of Chengtu, are extremely dirty and plainly bespeak the absence of any sanitary measures. Chungking affords a few electric street lights, but, generally speaking, there is no street lighting of any kind as a municipal undertaking. The city of Chengtu is the exception, as it is provided to a certain extent with kerosene lighting.

The water supply, obtained from rivers and wells, is brought to the houses by coolie carriers. The disposal of sewage depends upon very indifferent drainage arrangements. Fortunately for Chungking, its natural drainage is good and consequently each heavy rain has a very salutary effect. For fire protection hand pumps throwing water 30 or 40 feet are used, the water being obtained from stone pools to be found throughout the cities. These facilities are entirely inadequate, and usually it is necessary to resort to the destruction of buildings in the pathway of the fire in order to get it under control. The universal use of tile roofs and the construction of fire walls restrict the spreading of fires.

In the writer's opinion no noteworthy development will occur until the modernizing influence of railways is felt. However, it is reasonable to anticipate some reforms along these lines at Chengtu and Chungking during the next few years.

PUBLIC-SERVICE COMPANIES.

There are four lighting plants in this Province, located at Chungking, Chengtu, and Luchow.

The Chungking plant was installed by Arnhold, Karberg & Co. The boilers, stokers, superheaters, and feedwater heaters are Babcock & Wilcox products. The two engines, each of 375 break-horsepower, are Belliss & Marcom, Birmingham. The electrical equipment is Allgemeine Electricitäts Gesellschaft, Berlin. The capacity of the plant is 500 kilowatts, produced by two generating units, each of 250 kilowatts. The generating voltage is 440 and the consumer's 220. Distribution is on three-wire system through static balancers. The total lamp capacity of the plant is 16,000 20-watt lamps. The present consumption is about 6,000 lamps. The monthly charge for service is $1.50 Chinese currency (equivalent to Mexican) per 20-watt Tungsten lamp; light is furnished from dusk to dawn. This plant has been in operation about six years and, as a result of neglect, is now in extremely poor condition. It has never been operated profitably (the same being true of the Chengtu plant). Its owners (Chinese) are the Chu Chuan Electric Light Co.

The Chengtu plant is also operated by a Chinese company, the Ch'i Ming Electric Light Co. It was installed by Diederichsen & Co., but some of the machinery was supplied by Arnhold, Karberg & Co. The boiler is a Babcock & Wilcox and the engine a Browett-Lindley, British, of 110 horsepower. The electrical equipment is Allgemeine Electricitäts Gesellschaft, Berlin. The capacity of the plant is 125 kilowatt-volt-amperes, alternating current, of a generating voltage of 3,300, 50 cycles, and a lamp capacity of 5,500 20-watt lamps. The present consumption is about 3,500 lamps. The voltage to consumers is 110. Cost of service is $1.30 Chinese currency per lamp per month. Service is furnished from dusk to midnight.

The other company at Chengtu, the Shang Yeh Electric Light Co., was installed to provide light for the arcade, but it now furnishes a limited service to the general public. The capacity of the plant is 50 kilowatts, and the engine is of 60 horsepower. The machinery is said to be German. About 1,000 lights are now in use.

A small plant was opened on December 4, 1916, at Luchow. It was originally intended for private use but, as an experiment, has been extended for public use. The plant was supplied by the General Electric Co. of China, British. The engine is a Robey & Co. 80-horsepower and the boiler a Marshal. The electrical equipment is General Electric, Birmingham. The plant generates 12 kilowatts and has a voltage of 100. The total lamp capacity is about 500, and 400 lamps are now in use. The cost of the service is $1 Chinese currency per lamp per month. The service is available from dusk to midnight.

Undoubtedly Szechwan Province offers a rich field for the installation of lighting plants. The beginning has not been very propitious, as the present companies are not operating profitably. The Chinese have not yet learned that machinery needs care and much attention to every little detail. For firms obtaining a contract to install a lighting plant it would be advisable to insist upon the employment of a foreign engineer for at least three years. This should be beneficial to both the contracting firm and the lighting company, as the former would prove that such plants if properly operated are profitable investments, thereby increasing its business, and the latter would obtain that experience and familiarity with modern machinery without which it can never operate successfully.

There are no waterworks in this Province. Two years ago there was some talk of installing such a plant at Chungking, but it did not materialize. As with lighting plants, there are prospects of development, but at present there are no systems under contemplation. Much education is necessary to induce the people to carry out such developments, and if American houses want the business it would be advisable for them to assist in the preparation of this vast and rich field. The countries whose merchants are in personal touch with the market will receive the business.

TREATY PORTS AND FOREIGN CONCESSIONS.

Chungking is the only treaty port in the Province. It is situated on a rocky promontory at the juncture of the Chialing River with the Yangtze, about 1,550 statute miles from the mouth of the latter stream. Its estimated population is 460,000. There is a Japanese concession on the south bank of the river below the city, but it has never been developed. There are no restrictions as to foreign residence, foreigners living anywhere in the city and also in the hills on the south bank of the river. Five powers maintain consular establishments in Chungking, namely, France, Germany, Great Britain, Japan, and the United States. France and Great Britain also maintain consulates at Chengtu (the latter a consulate general), while Germany and Japan have offices there that are subsidiary to their Chungking consulates.

As to conditions surrounding foreign trade, it should be remarked that there is very little direct trade between Chungking and foreign countries. Regarding American trade as contrasted with that of other foreign nations it may be said that there are no conditions particularly favorable or unfavorable to it. As in many other places, American trade would be greatly benefited by the establishment of a few American business houses.

Wanhsien, situated on the Yangtze River about half way between Ichang and Chungking, was formally opened to foreign trade on March 16, 1917. It has an estimated population of 150,000 and is the chief city in Szechwan east of Chungking. Its opening to foreign trade will undoubtedly be conducive to trade development in that part of the province. In 1918 the net value of the trade of Wanhsien was $6,664,745, net imports of foreign goods amounting to $958,693, imports of native goods to $2,526,344, and exports to $3,179,708. The principal foreign imports were cotton yarn (1,369,056 pounds, valued at $579,773) and kerosene (561,796 gallons, valued at $230,718).

FINANCE AND BANKING.

The copper cash and its various multiples to the 100-cash piece (a 200-cash piece exists but is no longer minted) and also the dollar currency constitute the minted media of exchange. However, the currency of business is not any of the above currencies but the Szechwan tael, which was established as the uniform tael for the Province in 1908. The Szechwan tael is commonly known as the chiu-ch'i-p'ing, which means that 100 Szechwan taels are equivalent to 97 Kuping taels, the latter being the central-Government tael. All accounts of business houses are kept in the Szechwan tael. It may be stated here that the ratio between the dollar and the tael is fixed at 0.71, but the ratio between silver and copper constantly fluctuates. There are two grades of silver sycee on the Chungking market, known as lao-p'iao and hsin-p'iao. In any transaction the price is quoted according to the grade of silver in which payment is to be made, there being a difference in favor of the latter of about one-fifth of 1 per cent. It may be stated that some years ago the quality of silver on the Chungking market was better than it is to-day.

There are no foreign banks in Szechwan, and consequently the banking arrangements for foreign trade must be made at Shanghai or Hankow. Chinese banks, as is well known, have not yet developed into foreign-exchange banks. In all foreign commercial transactions there is the inevitable exchange between Chungking and Shanghai, which at times has a very marked effect upon the movement of trade.

There is not the same fixity of interest rates among Chinese banks as among foreign. The state of the money market and the supply of silver regulate interest rates. During certain recent months interest rates have been as high as 3 per cent per month but were usually about 1½ per cent. When money is very plentiful the rate may go as low as ¾ per cent per month, which may be considered the minimum. These rates are for short-term loans, from 15 days to 3 months. Three months is invariably the longest duration for loans made by these banks, and if money is desired for a longer period the loan is renewed.

The banks of Chungking, with a few exceptions, are ch'ien-chuang, or large cash shops. The most important phase of their business is the buying and selling of drafts, principally on Shanghai, but also on other cities in China. The financial transactions connected with the import and export trade of this port are handled by these ch'ien-chuang. Lending money for short periods is another important phase of their business. It may be surprising to know that very little money is loaned on security. These bankers will lend in any reasonable amounts to reliable persons of financial standing without any security whatever. When the borrower does not have the full confidence of the lender, security will be asked and also a higher rate of interest. Generally speaking, these banks do not handle mortgages. Again, these banks act as clearing houses on bank settling days, which occur on the first and fifteenth of each month, Chinese calendar.

These Chinese banks are not banks of deposit in the Western acceptance of the term. A deposit with a ch'ien-chuang is in reality a loan for a stated interval at a rate of interest agreed upon. The difference between the bank's borrowing and lending rates in a normal market is at the rate of about 3 per cent per annum, but of course it varies constantly with the demand for silver. Overdrafts, so far as interest is concerned, are treated as short-term loans. As indicated above, short-term loans against real estate as security are very rare and the same is true regarding crops as security. At this port the functions of native banks in native trade are not distinguishable from their functions in foreign trade.

What has been said above does not refer to the Bank of China and the Bank of Communications, which have thus far exerted little influence upon the local money market.

MANUFACTURING AND OTHER INDUSTRIES.

Among the principal industries in Szechwan are silk reeling and weaving, cotton-cloth weaving, the extraction of brine from wells and its evaporation, and paper manufacture.

During the past decade marked development is to be noted in the silk industry. Filature silk was first produced during this period, and this phase of the industry is growing rapidly. Filatures are said to number more than 50; many of these are steam filatures and 4 at least are rereeling filatures. Both Italian and Japanese methods are used, but it is claimed that the latter are preferred. A steady expansion in this industry is expected. The silk-weaving industry is also being developed. Wooden looms are still used exclusively. Chengtu is the chief center, but other silk-producing sections engage in weaving.

The cotton-cloth weaving industry is important. Native looms are found everywhere, but it is in Suining and Tungchwan districts that this industry is most flourishing. During the past few years a noticeable expansion has occurred. Thus far only native looms are used, but it is reasonable to expect that some development along modern lines will soon take place.

The extraction of brine from wells and its evaporation constitute an important industry. This industry has already been discussed under minerals and mining.

The manufacture of paper is a very general industry. The chief centers are Mienchuhsien, Kiungchow, and Luchow. Only native methods are in use, but it is believed that eventually opportunities will exist for the sale of paper-making plants. This Province has an abundance of excellent raw material for paper manufacture. The Lo Li Paper Co., of Chengtu, which started some years ago, is closed.

The preparation of leather and manufacture of leather goods is an industry that may be expected to develop. At present there are six leather factories in Chengtu. The Military Leather Factory is said to be the only one operated with machinery, which is of Japanese manufacture. American machines for sewing are used in all the factories. Saddles, shoes, and all kinds of leather goods are made. This factory is claimed to use about 10,000 hides per year. There are four small leather factories at Chungking.

At Chengtu there is a soap factory—the Hua Mao Soap Co.—in which German and Japanese machinery is used. Three inferior grades of soap are made, and the total output is about 6,000 cases per annum.

There are many match factories in the Province. There is a monopoly for the manufacture of this product. There are six match factories about Chungking, with the operation of two of which Japanese are connected. Only native machinery is used.

Among glass factories there is one at Chungking using Japanese methods. Both glass and fancy glassware are made by this factory. At Chungking there are also two hosiery-knitting factories, each of which is equipped with about 40 hand knitting machines.

At Chengtu there is a Government arsenal for the manufacture of rifles and ammunition, as well as a mint. At Chungking there is a mint for copper coinage only. These plants are fitted with modern machinery. There is a small machine shop in Chengtu.

The industries mentioned above are native. A foreign concern, the Yu Hsin Silk Filature, was established at Chungking during 1915. It is a joint Japanese-Chinese concern. It opened with 120 looms, which have since been increased to 200, and a further expansion of the factory is now being arranged. The present output is estimated at 300 hundredweight (long) per year. There is a Japanese as superintendent.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Chungking during the years 1904, 1913, and 1918:

Imports and exports.	1904	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	....	$576,820	$521,952
From Chinese ports	$10,135,848	7,731,339	5,305,844
Total foreign imports	10,135,848	8,308,159	5,827,796
Reexports of foreign goods to Chinese ports	1,272	2,691	50,752
Net total foreign imports	10,134,576	8,305,468	5,777,044
Imports of Chinese products	2,597,687	5,016,892	12,391,952
Reexports of Chinese products to Chinese ports	426	1,723	3,033
Net total Chinese imports	2,597.261	5,015.169	12,388,919
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	....	57,155	247,043
To Chinese ports	7,556,899	8,933,118	17,496,003
Total exports of local origin	7,556.899	8,990.273	17,743,046
Gross value of the trade of the port	20,290,434	22,315,324	35,962,794
Net value of the trade of the port	20,288,736	22,310,910	35,909,009

A few general remarks applicable to both imports and exports should be made here in order to avoid repetition. The trade of Szechwan Province is tributary to Shanghai and Hankow and is largely in Chinese hands. The principal importers, the cotton-goods merchants, engage largely in export trade in order to obtain credits at Shanghai to pay for their purchases and thus avoid a fluctuating and frequently burdensome exchange. The same transportation difficulties handicap both branches of trade. As elsewhere pointed out, west of Ichang junks are the principal commerce carriers, steamers to Chungking being a recent innovation and hauling as yet a very small percentage of the trade. It is chiefly because of the limitations and difficulties surrounding transportation on the Upper Yangtze that the commerce of this Province is handicapped. Lack of banking facilities and other adverse factors there are, but these would to a great extent disappear if safe and cheap transportation facilities were available.

EXPORT TRADE.

The total exports from Chungking increased from $7,556,899 in 1904 to $8,990,273 in 1913 and $17,743,046 in 1918. When it is understood that the year 1904 included an opium export of $2,795,060, a factor which in 1911 disappeared from the trade returns as a result of prohibition, the healthy growth in this branch of trade becomes apparent. In other items, generally speaking, there occurred considerable increases, and, in addition, several important products have been added to the list of exports. Chief among these are grass cloth, intestines, and wheat. Wheat has attained its present importance since the cultivation of the poppy was prohibited. This Province and its commercial tributary territory are rich in products, and, given cheaper transportation facilities and modern methods of production, both the export and the import trade would be vastly increased.

Generally speaking, native products are, in the first place, collected by peddlers and disposed of in the small market towns. They are then brought to market centers or larger towns by dealers, who in turn sell them to agents of Chungking merchants. An abundance of waterways facilitates transportation to Chungking. There are few products, however, as for instance wool, in the trade in which Chungking does not figure prominently. There are no steam packing facilities there, and consequently certain products must be sent to Hankow or Shanghai for final packing.

The principal Chinese exports of local origin for 1904, 1913, and 1918 are shown in the following table:

Articles.	1904		1913	1918	
	Quantity.	Value.	Quantity.[1]	Quantity.	Value.
Bristles........pounds..	1,734,544	$329,159	2,047,360	2,016,672	$1,321,058
Feathers, duck, fowl, etc........do....	492,240	14,393	1,016,176	256,928	30,291
Fungus........do....	792,400	135,377	969,248	713,328	370,023
Grass cloth........do....	....	....	570,304	585,088	922,021
Hemp........do....	1,372,672	63,861	2,447,088	5,003,584	644,777
Hides, cow and buffalo........do....	3,435,712	316,127	3,311,840	2,762,368	435,237
Intestines........do....	....	....	332,976	....	137,391
Leather........do....	149,632	27,081	44,800	85,008	102,853
Medicines........value..	....	671,942	$902,076	....	2,416,914
Musk........pounds..	4,483	678,536	2,960	948	275,584
Nutgalls........do....	1,003,952	165,516	1,114,624	2,036,832	453,906
Opium, native:					
Szechwan........do....	1,252,608	1,898,091	....	....	....
Yunnan........do....	372,288	896,969	....	....	....
Rhubarb........do....	1,141,056	79,718	2,394,672	915,488	117,553
Safflower........do....	14,336	4,121	....	....	....
Silk, raw:					
White—					
Not rereeled and not steam filature........pounds..	1,120	2,833	13,440	8,932	23,200
Rereeled........do....	....	....	....	1,600	7,861
Steam filature........do....	....	....	16,800	14,668	88,526
Yellow—					
Not rereeled and not steam filature........pounds..	705,040	813,665	954,576	851,868	2,048,738
Rereeled........do....	....	....	....	113,200	542,830
Steam filature........do....	....	....	171,920	377,468	2,183,106
Wild........do....	269,696	154,244	77,168	16,400	20,388
Cocoons, refuse........do....	1,772,288	250,094	2,395,120	3,137,332	785,829

[1] Except in the case of medicines, the values for 1913 are not available.

Articles.	1904		1913	1918	
	Quantity.	Value.	Quantity.	Quantity.	Value.
Skins (furs), goat, untanned.......pieces..	797,342	$310,843	1,562,857	1,451,770	$1,687,453
Tallow:					
Animal.......................pounds..	164,976	7,084	1,147,888	758,128	70,683
Vegetable.........................do....	224,806	11,664	1,212,848	83,216	6,477
Turmeric..............................do....	1,931,776	27,991	3,859,296	956,256	44,834
Wax, white..........................do....	990,080	229,040	869,680	1,568,000	921,470
Wheat.................................do....	....	....	3,445,792	5,267,480	69,289
Wool, sheep's.......................do....	4,153,520	217,091	4,264,624	1,996,736	681,329
All other articles..........................	....	242,459	....	....	1,326,740
Total..		7,556,899	....	....	17,743,046

The largest and most important export from this Province is silk. Its development is indicated in the above statistical table. The filature industry was started during the past 10 years and is growing rapidly. This export is very largely handled by Chinese. British India and France are large buyers.

As 1904 was an unusual year for bristles, the expansion is really greater than is indicated by the figures for the years under comparison. The variation in prices has been steadily upward. The greatest increase has occurred in the shorter lengths. The bristle season is from February to July.

Feathers have been a growing export, but in consequence of the war their importance has diminished considerably. Germany was ordinarily the largest consumer. The feather season begins in September. Hemp is a growing export and is being more widely cultivated. Some of this fiber is sent to Italy for the manufacture of baskets for wine bottles, but much more is used elsewhere in the manufacture of carpets. Its exportation is entirely in Chinese hands. Prices have varied very little during the past 10 years.

During the past decade hides have steadily continued to be an important export. These must be shipped to Hankow or Shanghai for packing for the foreign market. During the winter and spring is the trade season. Between 1905 and 1913 prices of cow hides increased approximately 50 per cent and a further increase has since been recorded.

Medicines of all kinds have shown a steady increase. These originate principally in Tibet, western Szechwan, and the Kokonor. This export is mostly consumed by the Chinese of other Provinces. Although many of these medicines are unsuitable for foreign trade, some of them, such as licorice, aconite, snakeroot, scullcap, and discorea, are used by foreign pharmacists.

Winter is the trade season for musk. Formerly Germany made large purchases, but during recent years France and other countries have been much larger buyers. The export of musk during the past few years shows a decrease as compared with that of 1904 and previous years, probably because of the manufacture of synthetic musk in Europe. Prices have varied little, but since the beginning of the war have increased somewhat.

Nutgalls have not increased proportionately with the general development in the export trade. This commodity is used for dyeing purposes and the United States is a large consumer of it. Nutgalls are harvested in August and September.

Opium, which was the largest export in 1904, is no longer an article of trade.

Rhubarb is used for medicinal purposes. Pikou in Shensi and Sungpan in Szechwan are the principal market centers. During the late winter and spring it arrives on the Chungking market. Prices in 1906 seem to have been higher than at any time since then—the decrease being no more than about 15 per cent, however.

Safflower was formerly largely cultivated for dyeing purposes and a good deal was exported, but on account of the popularity of aniline dyes its cultivation became restricted to correspond to the demands from the local dyeing industry.

A marked expansion in the exportation of goatskins has been recorded. The market season continues through the cold months, from October to April. Besides goat, other skins are becoming more important, such as cat, rabbit, doe, and raccoon, and it is believed that trade in these commodities is susceptible of considerable expansion.

A very marked expansion has occurred in animal and vegetable tallow (though 1918 registered a sharp decrease as compared with 1917). Russia and Japan are the largest foreign markets for the former and Great Britain and the United States for the latter. The tallow is largely used in the soap industry. During the war a strong demand has existed for use in munitions manufacture. Vegetable tallow is harvested in the autumn.

Turmeric, for dyeing purposes, is used principally in China. Its trade season is from March to July.

White wax, used principally in the manufacture of candles, has increased in importance. Hongkong is the largest importer of this commodity, which is chiefly consumed by the candle industry of Kwangtung Province.

The exportation of sheep's wool has fluctuated. This product originates in western Szechwan and Tibet, where sheep are largely raised. The buying season in the principal wool markets, Tachienlu and Sungpan, is from February to May. Wool is now prepared and packed at Kwanhsien and sent directly to Shanghai. It is there prepared and packed for the foreign market. The United States is a large buyer for use in the carpet industry. This is an inferior quality of wool. Chungking prices for wool have recorded a big increase since 1904.

In 1904 the total export of grass cloth was less than $2,000. It is now one of the principal exports and is rapidly increasing in importance. Grass cloth is manufactured from ramie fiber, of which there are three crops annually. At present very little of the Szechwan product is marketed abroad. Although, as is claimed, its quality is not so fine as that of Swatow, a market for the best grades should be found in the United States. The industry and export are entirely handled by Chinese.

The export of pigs' intestines has fallen off since 1914 because the German market has been cut off. At present the United States and England are buying. The export of this product could be greatly increased. Goats' intestines are not now exported, but, if suitable for the foreign market, they can be found in Szechwan in large quantities.

Wheat is a growing export and is marketed in other parts of China.

Fungus is also exported for Chinese consumption.

In 1918 the only article invoiced at the Chungking consulate for exportation to the United States was silk brocade, valued at $187. In 1917 the declared exports to the United States consisted of $38,312 worth of bristles and $297 worth of silk brocade. In 1913 the only declared export was wool, valued at $18,045.

IMPORT TRADE.

Changes in native customs, such as the short-lived popularity of foreign clothing, have had only a brief effect upon trade. The attitude toward foreign goods may generally be described as indifferent, cheapness in price being the all-important criterion.

As stated elsewhere, imports are purchased chiefly at Shanghai by local Chinese firms. The trade in the hands of foreigners is confined largely to such firms as distribute their own products. Except for the products of three well-known foreign firms, the usual Chinese methods of distribution obtain. Regarding credit, a local firm that occasionally imports states that it invariably demands 25 per cent with order and cash against delivery at Chungking. It has been a practice of some firms to grant three to six months' credit for half the amount of the purchase. The comprador system is generally employed, and exporters say that the services of this middleman are indispensable.

In connection with packing it may be said that large packages are difficult to handle and for that reason all bales of cotton yarn are so packed as to be readily divided into two at Ichang. Goods destined for the interior must frequently be repacked at Chungking. No general directions can be given, as packing varies with the route and mode of transportation.

The following table shows the principal articles of import (net) for the years 1904, 1913, and 1918:

Articles.	1904		1913	1918	
	Quantity.	Value.	Quantity.	Quantity.	Value.
FOREIGN GOODS.					
Braid, cotton and fancy............value..	....	$6,393	[a] $32,471	(b)	(b)
Buttons............................gross..	246,325	67,986	14,415	28,110	$4,452
Clocks and watches..............number..	....	15,153	11,552	2,291	5,385
Cotton goods:					
Chintzes and plain cotton prints ....pieces..	18,259	27,717	12,309	11,976	93,486
Cotton italians, plain and figured .do...	169,900	629,562	192,887	(b)	(b)
Cotton lastings, plain and figured.do...	106,568	257,691	16,010	(b)	(b)
Cotton venetians, plain, colored, and fast black..................pieces..	....	....	37,720	(b)	(b)
Drills..............................do....	9,360	25,043	6,445	240	1,340
Printed drills, furnitures, and twills ....pieces..	10,053	13,545	506	(b)	(b)
Sheetings..........................do....	80,004	184,879	22,082	1,710	12,955
Shirtings—					
Gray, plain.....................do....	447,675	924,724	193,482	30,742	208,708
White, plain....................do....	73,738	198,320	225,050	90,896	629,940
Turkey-red cottons and dyed T cloths..........................do....	28,721	48,553	17,045	4,560	15,826
White irishes......................do....	20,934	58,501	1,802	(b)	(b)
Yarn.........................pounds..	47,282,368	6,205,056	25,882,640	4,067,056	1,443,436
Velvets and velveteens..........yards..	415,138	40,402	213,534	35,132	18,666

[a] The fact that the first amount given in this column is an expression of value should not mislead the reader with respect to the figures that follow. These represent *quantities*, except when the dollar sign precedes them. In most instances the values for 1913 are not available.

[b] Figures for 1918 not available.

Articles.	1904		1913	1918	
	Quantity.	Value.	Quantity.	Quantity.	Value.
FOREIGN GOODS—continued.					
Dyes, aniline.......................value..	....	$128,397	$207,377	....	$9,704
Ginseng, American and Japanese. pounds..	47,508	45,755	27,158	18,274	42,955
Hosiery..........................dozen..	....	....	37,099	34,928	33,811
Lamps and lamp ware.............value..	....	7,242	$30,551	....	33,468
Medicines...........................do....	....	17,793	$94,158	....	125,142
Milk, condensed, in tins...........dozen..	2,024	2,025	3,570	5,672	12,180
Needles......................thousands..	344,280	48,223	958,900	31,186	34,414
Oil, kerosene:					
American.....................gallons..	6,360	867	782,850	(a)	(a)
Russian..........................do....	13,660	1,591	....	(a)	(a)
Seaweed and agar-agar...........pounds..	2,753,632	50,629	3,944,416	2,271,248	53,774
Soap, toilet.......................dozen..	104,623	21,657	28,729	(b)	(b)
Soda ash..........................pounds..	916,944	14,235	910,112	(b)	(b)
All other foreign articles..................	....	1,092,037	....	....	2,997,402
Total foreign goods.................	....	10,134,576	....	....	5,777,044
CHINESE GOODS.					
Cotton yarn........................pounds..	11,278,848	1,850,245	17,255,616	22,639,344	10,758,259
Drills...............................pieces..	....	....	35,390	40,965	297,137
Medicines..........................value..	....	112,449	$219,175	....	285,116
Silk piece goods...................pounds..	75,824	266,032	45,696	18,816	128,365
All other Chinese articles..................	....	368,535	....	....	920,111
Total Chinese goods.................	....	2,597,261	....	....	12,388,919

[a] The value of all the kerosene imported during 1918 (1,950,230 gallons) was $696,882.
[b] Figures for 1918 not available.

Among cotton goods, it will be seen that cotton yarn is the most important item. Including native yarn the imports for 1904, 1913, and 1918 were, respectively, 58,561,216, 43,138,256, and 26,706,400 pounds.

Italians and venetians are very popular because of their silky appearance. In the aggregate, piece goods have been adversely affected by unfavorable local conditions. Also, some foreign piece goods have shown a decrease as a result of competition from Chinese goods. Foreign drills, in 1904 entirely American but now largely Japanese, have decreased while native drills have become very important (drills are used for the uniforms of the soldiers). Gray shirtings are suffering a similar fate by reason of the importation of Hupeh shirtings through Native Customs. The importation of these shirtings or sheetings is said to be large. Chintzes enjoy a good demand at present. English goods predominate in all the principal descriptions. American goods are unrepresented.

Cotton braid, principally Japanese, is a growing import.

Cigarettes show an increase, but they have not become popular among the Szechwanese and their importation is now falling off.

Clocks and watches have recorded a decrease. Clocks are chiefly Japanese. Cheapness is the principal criterion for this market. In this line suitable American goods should find a sale.

German aniline dyes were enjoying an increasing demand until the war stopped the supply. German artificial indigo was first imported in quantity in 1913, to be almost doubled the following year.

The ginseng import shows a decrease. In 1904 the import from the United States amounted to 8,533 pounds, as compared with 5,912 pounds, valued at $43,295, in 1916. The bulk of the import is Japanese, but this is in cheaper grades. Hongkong is the principal distribution center for the American article.

Hosiery was not listed as a separate article in 1904. In 1911 the import amounted to 10,606 dozens and in 1914 to 73,209, but since then it has fallen off. Local production is probably the principal cause. Japanese manufactures are the most widely marketed.

Lamps and lamp ware have enjoyed an expanding demand, and with the increasing use of kerosene a larger trade may be expected. At present Japanese and American lamps are principally marketed.

Foreign medicines have recorded a marked increase, in which British and Japanese manufacturers have benefited largely.

Condensed milk has shown an increase, in which American, British, and Swiss products have shared. Milk is becoming more appreciated by Chinese who can afford it and a steady increase may be expected.

Needles were entirely a German import before 1914, and an increasing one, but as a result of the war the Japanese product is now on the market.

American kerosene has increased and will undoubtedly continue to do so. More attention is now being given to the development of this market.

Soda ash, a British product, is being used for cloth bleaching and dyeing purposes and in the manufacture of paper.

Sewing machines, not shown in the table, form a line in which American goods share. A marked increase in imports occurred during 1912 and 1913, but since then the demand has fallen off. In 1913, 1,629 sewing and knitting machines were imported.

The import of metals and woolen goods is unimportant.

Among lines in which American goods might be introduced or enjoy a greater share of the market, the following may be enumerated: Clocks and watches, hosiery, lamps and lamp ware, medicines, enameled ware (basins and bowls), condensed milk, toilet soap, soda ash, and aniline dyes. At present there is a ready market for the last two articles because the supply from the usual sources has not been forthcoming. Generally speaking, in connection with this market it should be remembered that cheapness is a necessary qualification. Therefore toilet soap, enameled ware, etc., must, in cheapness and quality, compare favorably with competing goods. There is also a small market for wire rope, wire nails, and general hardware that should interest American manufacturers.

Information furnished under the heading "Shipping facilities for trade with United States" by the consulate general at Shanghai is applicable for the trade of Chungking.

FACILITIES FOR TRAVEL.

There are no hotels in Chungking at present where foreigners would care to stop. Spring and autumn are the best seasons of the year for visiting Chungking. The intense heat in summer and the absence of steamer transportation in winter, from December to April, are the conditions unfavorable to travel during those periods. There are several steamers on the Ichang-Chungking run. Owing to the absence of suitable hotels tourists usually live on board the steamers, which remain in port from two to four days. For those who must travel in winter it is necessary to charter a native boat, which must be provisioned and furnished. The journey takes from three weeks to a month at that time of the year.

TRADE ORGANIZATIONS IN DISTRICT.

There are two general chambers of commerce in this district, one each at Chengtu and Chungking, and a chamber of commerce in almost every district city (the designation "general" used here only denotes relative importance).

At Chungking there are nine "provincial clubs" and innumerable craft or trade guilds. Every trade and every industry has its guild, such an organization existing even for the beggars on the streets. The power of the local guilds is very great, and the regulations of some of them prescribe severe penalties for their infraction. The chamber of commerce may be likened to a large central guild, with the actual guilds as its branches. When the interests of any guild concern another or the officials, the chamber of commerce acts as the intermediary. There is even a tendency toward invoking its assistance on behalf of individual interests, especially where official action is involved. It has connections with the guilds and "provincial clubs," and its counsel in other than the purely internal matters of these organizations is invariably decisive. It is understood that similar conditions prevail at Chengtu.

There are no foreign-trade organizations in this district.

AMERICAN INTERESTS.

American interests in this district are largely missionary. In 1881 the first American mission—the Methodist Episcopal—was opened at Chungking. Since then a gradual expansion has occurred, and now American mission stations are found in eight different cities in the Province. The missions maintaining stations are the Methodist Episcopal, the American Baptist, the Foreign Christian, the American Bible Society, and the Seventh Day Adventist. These missions are giving much attention to educational and medical work, as has been indicated in another part of this chapter. Their medical personnel includes 14 doctors, and for their work there are 6 hospitals. British missionaries, according to the statistical report for 1915, numbered 408, while Americans numbered 102. The work of the British is conducted along the same lines as that of the American societies. The number of Catholic missionaries in this field is also greater than the American. German missionary interests are relatively very small.

American commercial interests are confined to two importing firms that have established branches in Chungking for the distribution of their own products.

Other American activities are limited to teaching. Two Americans are engaged as teachers in the Government schools at Chengtu. In this particular American interests compare favorably with those of other countries.

The European war has had little effect upon the American trade interests of this district. These interests are confined to kerosene oil and sewing machines, and except in the matter of increased freight rates the effect of the war has not been felt.

The most promising field for American commercial activity is indicated under the next heading.

GENERAL TRADE SUGGESTIONS.

In view of what has already been said, the importance of Shanghai in respect to the trade of Szechwan Province will be appreciated. Generally speaking, American manufacturers should direct their efforts on that port, and they will thus be in touch with the market of this territory. However, along certain lines, which show indications or possibilities of development, direct contact with this market will be advantageous, as encouragement and promotion will be required to overcome the natural hesitancy that invariably surrounds the adoption of new methods. In this chapter some of the lines in which opportunities exist have been pointed out and may be here enumerated, as follows: The installation of electric lighting plants, machinery for flour milling, paper manufacturing, salt wells, cotton cloth and silk weaving, sugarcane and oil expressing plants (for wood-oil nuts, rapeseed, etc.) and possibly waterworks and mining machinery. As there is evidence that much more attention will be paid to this territory by foreign interests than heretofore, American merchants should take such steps as to insure for themselves a commensurate share in this development.

TIBET.

As Tibet is still comparatively an unknown land and is at present of little commercial importance, discussion of it will be confined to a few brief paragraphs.

Tibet proper—that is, not including the Kokonor region—is part of the Chungking consular district. It lies between latitude 28° and 36° north and longitude 79° and 98° east. It is bounded on the north by Sinkiang (Hsinchiang or New Province) and the Kokonor, on the east by the Kokonor, Szechwan, and Yunnan, and on the south and west by India. The area of Tibet, including the Kokonor, is generally given as 463,320 square miles, but by Stanford as 700,000 square miles. Tibet proper comprises the greater portion of this area. The population of the two territorial divisions is estimated at 6,430,000, but by some authorities is thought to be much less. The population is confined chiefly to the river valleys of the east and south.

Tibet is a vast mountain mass. In the north and west there is an immense table-land and on the east and south there are high ranges and deep river valleys. Some of its plains are more than 11,000 feet above sea level, and its ranges are among the highest in the world. There are many salt lakes on the high table-lands. The climate is necessarily varied but is generally very dry and healthful. It is subject to extremes of great cold and heat, and in the southern part much rain and snow fall in season.

Tibet is a dependency of China. Since the revolution of 1911 no Chinese resident commissioner or "amban" has reside at Lassa. At present the relation of Tibet to China is the subject of diplomatic discussion between Great Britain and China. The Dalai Lama and Panshen Lama are the great religious heads of Tibet, as also of Lamaism, and are virtually its rulers. The jurisdiction and influence of the latter are restricted within much narrower limits than those of the former. The country is ruled by petty kings who are under the control of the high lamas.

There is little agriculture. The raising of domestic animals is the principal occupation of the people. Yaks, sheep, goats, horses, etc., are reared in great numbers. The yak is the principal beast of burden, especially over difficult mountains. Wild animals of many species abound and add much to the wealth of the country. Little is definitely known of its mineral wealth, but it is believed to be abundant and varied. Gold and silver and precious stones are known to exist.

The trade between China and Tibet is considerable. Tachienlu in western Szechwan is the chief center of this trade. The principal exports that pass through Tachienlu are wool, skins, furs, musk, deerhorns, medicinal herbs, and gold. Its chief imports are tea, cotton goods, tobacco, candles, and sundries. Some of the articles of export of Chungking are the products of Tibet and the Kokonor. The principal route between China and Tibet is the Chengtu-Tachienlu-Batang-Lassa road.

There are three trading marts in Tibet where foreign trade may be carried on. These have been opened by British treaties and are near the Indian border. They are Gartok in western Tibet and Gyantse and Yatung in southern Tibet. The trade through these marts is inconsiderable.

DAIREN CONSULAR DISTRICT.

By Vice Consul E. R. Dickover.

LOCATION AND AREA.

As one of the results of the Russo-Japanese War, by the terms of the Treaty of Portsmouth, Japan took over the Russian lease of the Liaotung Peninsula, in Southern Manchuria, together with the adjacent islands, and gave the land thus acquired the name of the "Kwantung Leased Territory." This, with the South Manchuria Railway Zone, comprises the Dairen consular district. The territory lies between 38° 41′ and 39° 30′ north latitude (approximately the position of the southern part of the State of New Jersey) and 122° 33′ and 121° 50′ east longitude, and the area is very nearly that of the State of Rhode Island, or 1,220.5 square miles. For the purpose of administration the territory is divided into two districts, named after the seats of administration—the Dairen district, comprising the eastern two-thirds of the Territory and the Ryojun (Port Arthur) district, comprising the western third.

POPULATION.

The population of the Kwantung Leased Territory (according to the census of 1914) was 607,123, distributed among the various nationalities as follows: Japanese, 82,185; Chinese, 524,681; foreigners, 257. The Japanese practically all reside in the cities (Dairen, Port Arthur, and Chinchow), while the Chinese are mostly farmers and laborers, residing in the rural districts. As the Chinese greatly predominate, the population is mostly rural, the percentages being: Rural, 86 per cent; urban, 14 per cent. Although the district has been under cultivation for many centuries the soil is very poor and the density of population is only 42.9 per square mile, rather below that of the whole of Asia, which is 48.02 per square mile, and a trifle more than that of the State of Wisconsin, which was 42.2 per square mile in 1910.

However, the statistics of the population of the Territory are not exact, as there is a large floating population of Chinese laborers, which it is difficult to include in a census.

PHYSICAL FEATURES.

The configuration of the land is much like that of portions of the coast section of southern California. It is hilly, with no high mountains and no broad valleys. The highest mountain is one in the vicinity of Chinchow, which rises 2,210 feet above sea level. There are no large rivers; in fact, the only streams are small creeks that often dry up during the rainless seasons. The soil is very thin and rocky, while the hills are absolutely stripped of all vegetation, except in those few spots where the Japanese have begun reforestation. Because of the lack of vegetation, the hills are everywhere seamed with deep gullies, cut by the sudden flow of water during the rains.

CLIMATE.

The climate of the Kwantung Leased Territory is peculiar to itself, and is only slightly comparable to that of southern Chile. The scarcity of rainfall gives it the semi-arid characteristics of portions of the southwestern States of the United States, but it differs from them in that its northern situation gives it a low temperature during the fall, winter, and spring, as is shown by the following table, which gives the average temperatures (Fahrenheit) for each month for the five years from 1910 to 1914, inclusive: January, 24.1°; February, 28.0°; March, 34.9°; April, 47.7°; May, 59.4°, June, 67.8°; July, 73.6°; August, 75.4°; September, 67.5°; October, 56.1°; November, 40.8°; December, 27.3°. This gives an average temperature for the whole year of 50.2° and seasonal temperatures as follows: Spring, 47.3°; summer, 72.3°; autumn, 54.8°; winter, 26.4°.

The average annual rainfall is small, and comes principally in the summer months. The following shows the average monthly rainfall for the five years from 1910 to 1914, inclusive: January, 0.52 inch; February, 0.31 inch; March, 0.96 inch; April, 0.92 inch; May, 1.25 inches; June, 1.96 inches; July, 6.50 inches; August, 5.60 inches; September, 5.03 inches; October, 1.36 inches; November, 1.54 inches; December, 0.33 inch. The average annual rainfall, therefore, is 26.38 inches, or about that of the coast section of southern California, but it differs in the fact that, while the rainfall in southern California occurs in the winter and spring months, the rainfall in southern Manchuria is almost entirely confined to the four months from June to September, inclusive.

The air of the Territory, because of the scarcity of rainfall, is usually dry, and in the winter, cold and bracing. During the summer, however, there are apt to be hot, muggy days, and when the wind blows strongly from the northwest there are dust storms which at times obscure the sun. As a general thing, however, the climate is preferable to that of southern China, and many foreign residents of Shanghai and Hongkong now spend their summer vacations in Dairen or Port Arthur.

POLITICAL SUBDIVISIONS.

The entire Kwantung Leased Territory is under the jurisdiction of Japan, with a governor general, usually a military officer, appointed by the Emperor of Japan with the consent of the Cabinet. Under the governor general are the heads of the two administrative departments, the civil and the military. The chief of staff (the head of the military department) has sole jurisdiction over the whole of the Territory, but the civil administration (as has been mentioned above) is divided into two districts with a civil administrator at the head of each, both subordinate to the civil governor. The mayors of Port Arthur and Dairen and the village heads (Chinese) of the country districts are directly responsible to their respective civil administrators. The offices of the Kwantung government, the military department, the civil government, and the civil administration of the Port Arthur district are all located at Port Arthur, while the offices of the civil administration of Dairen district are in Dairen.

The civil authorities have jurisdiction over the police, harbors, tramways, railways, schools, parks, etc., while the military authorities control the distribution of troops and erection of fortifications.

EDUCATION.

When the Japanese acquired control of the Leased Territory they found a large number of private Chinese schools in operation, but practically no public schools, and for that reason the percentage of literacy among the grown Chinese is rather low, only the better-class Chinese being able to read and write. Since that time (about 12 years) the Japanese have established 11 primary schools for Japanese children and 7 for Chinese children. In addition, there are two girls' higher schools, one middle school, and one technical college, open to both Chinese and Japanese. These are all maintained by the Kwantung government.

The Chinese children, however, are still educated principally in small private Chinese schools. In 1913 there were 289 of these, with 7,341 pupils. Among the larger private schools are the Port Arthur Language School, the South Manchuria Railway Co.'s Engineering School, and the Dairen Commercial School. There are no foreign schools in the Leased Territory.

The schools being established by the Kwantung government are all the best of their kind, with modern European equipment and trained teachers. New, sanitary buildings are being erected as rapidly as the necessary funds can be obtained, and Dairen and Port Arthur promise to become centers of education for Manchuria.

The hospitals in the Leased Territory are as follows:

Dairen:
- South Manchuria Railway Hospital.
- Lower-Class Women's Hospital.
- Isolation Hospital.
- Twenty-one private hospitals.

Port Arthur:
- Kwantung Government Hospital.
- Lower-Class Women's Hospital.
- Isolation Hospital.
- Two private hospitals.

The South Manchuria Railway Hospital is worthy of exceptional notice. It is a very well-equipped, well-managed institution, with the best Japanese physicians and surgeons in charge of the various departments. With the completion of the new buildings, it is claimed that it is the largest and best hospital in North China.

All equipment and supplies are imported from Japan, for both the schools and the hospitals.

AGRICULTURE.

As has been mentioned before, the configuration of the land and the character of the soil are such that the Leased Territory can never become an important agricultural district. The soil is shallow, rocky, and poor, but can, by careful farming, produce one fairly good field crop per year. The principal crops, with their yield per acre, are as follows: Maize (Indian corn), 15 bushels; kaoliang (a species of millet), 14.9 bushels; soya beans, 4.5 bushels. Maize and kaoliang are planted about the middle of April and harvested at the end of July, while beans are planted about the first of June (the beginning of the rainy season) and harvested during September.

Where the fields are small and rocky, the soil is tilled by hand, large mattocks or hoes being used. Where conditions permit, the soil is plowed with a crooked stick, iron shod, which stirs up the soil for a depth of 3 or 4 inches and is drawn by various combinations of oxen, donkeys, mules, and small Manchurian ponies. A harrow is sometimes attached to the plow, and sometimes the fields are gone over by hand, the larger rocks picked out, and the soil smoothed down. The principal fertilizers are manures and bean cake (the residue after the oil has been pressed from soya beans). The bean cake is dissolved in water and spread over the fields. These fertilizers are used only for maize and kaoliang; beans are alternated yearly with maize or kaoliang and do not require fertilizers. The methods of farming are extremely crude, but the farmers (Chinese) are too poor to invest in modern agricultural implements. The Japanese Government maintains an agricultural experiment station in Dairen, where better methods of farming and new varieties of crops are being tried out, with the purpose of improving the condition of the agricultural classes. Some fruits, especially apples and grapes, have been found to thrive well in this climate, and it is probable that in the future a considerable amount will be produced on areas not suited to field crops.

The farmers, as a rule, do not have sufficient funds to carry them until the next crop can be marketed; consequently they borrow money from the grain and bean brokers on their future crops. As a high rate of interest is necessary on such loans, the farmers are usually heavily in debt.

Stock and sheep raising are large industries in the Leased Territory, as there are considerable tracts of land not suited to farming. According to a recent census, the live stock in the Territory was as follows: Cattle, 30,848; donkeys, 26,743; mules, 12,320; horses, 2,338; pigs, 65,340; sheep and goats, 13,020. The cattle, donkeys, mules, and horses are used in working the farms and for transporting the crops to the markets, and a few are exported to various Chinese ports. The pigs are used for food by the farmers and are usually slaughtered on the farms. The raising of sheep for wool is becoming more important every year.

Soya beans, and the bean oil and bean cake manufactured therefrom, are the principal agricultural products exported from this district. It is impossible to estimate just what proportion of the beans and bean products exported from Dairen originate in the Leased Territory, as the beans are brought down from as far north as Harbin to be shipped at Dairen. The soya beans raised in this district are of four kinds, the yellow soya, the small green soya, the black soya, and the red mungo. They are not considered as edible beans in their natural states. Some of them are exported raw to Japan, to be manufactured either into "soy" (a sauce largely used by the Japanese) or into bean oil (used in making soap and for various other purposes) and bean cake (largely used as fertilizer on rice and sugar-cane fields). However, the greatest proportion of the bean products are manufactured in Dairen and other parts of the Leased

Territory, and the subject will be considered later under "Industries" and "Exports."

MINERALS.

The Kwantung Leased Territory is not a mineral district. There is one ancient gold mine, but it proved unprofitable and has not been worked for many years. An asbestos deposit has been discovered, and is now being worked on a small scale. A large quantity of coal is shipped from Dairen, but it is all mined in or near Fushun, in Manchuria.

COMMUNICATIONS: GENERAL INTRODUCTION.

In considering the subject of communications, the fact that Dairen is the southern terminus of the South Manchuria Railway must be strongly emphasized. The South Manchuria Railway is the "raison d'etre" of Dairen and, indeed, of the Kwantung Leased Territory. Before the Russians built the branch of the Trans-Siberian Railway down through Manchuria in their search for an ice-free port, Dairen and Port Arthur did not exist, except as small Chinese fishing villages. The Russians at first made Port Arthur the terminus of the railway, but as the harbor was shallow and tended to silt up, the terminus was shifted to Dairen (then called Dalny). Extensive harbor improvements, such as breakwaters and deep-water docks, were started and after the Russo-Japanese War the Japanese continued the work. At the present time Port Arthur is the seat of government for the Territory, while Dairen has become the commercial center, not only for the Leased Territory, but for a large part of southern Manchuria as well.

There are no internal waterways in the Leased Territory, but there is a large amount of coastwise shipping, as well as ocean-going shipping (treated later under the heading of "Shipping facilities").

The coasting services are as follows:

Dairen-Chefoo-Chemulpo; weekly; one steamer.
Dairen-Tientsin-Antung; twice every 11 days; two steamers.
Dairen-Chefoo; once every 2 days; one steamer.
Dairen-Chefoo-Tsingtau; once every 3 days; two steamers.
Dairen-Pitsuwo; once every 3 days; one steamer.
Dairen-Liushutun; four times per day; one steamer.

These boats are of the 1,000-ton to 2,000-ton class, and there are good passenger accommodations on the larger vessels. The produce carried consists principally of coal, bean cake, cotton goods, flour, matches, and kaoliang. There are also a large number of Chinese junks engaged in the coasting trade, a total of 11,533 sea-going junks having cleared from the port of Dairen during 1917. There are no foreign (European or American) vessels engaged in coastwise traffic.

SOUTH MANCHURIA RAILWAY.

The only railway in the Kwantung Leased Territory is the South Manchuria Railway. This line operates from Dairen and Port Arthur to Kwanchengtze (near Changchun), connecting there with the Chinese Eastern Railway, which in turn connects at Harbin with the Trans-Siberian Railway. The South Manchuria Railway also connects at Mukden with the Peking-Mukden line. The mileage of the main and branch lines is as follows:

	Miles.
Main line:	
From wharf, Dairen, to Kwanchengtze	439.0
Branch lines:	
From Hunho (near Mukden) to Antung	165.4
From Choushuitzu to Port Arthur	28.8
From Tashihkiao to Yingkow (Newchwang)	13.9
From Suchiatun to Fushun	30.8
From Yentai to Yentai coal mine	9.7
Total	687.6

The main line and all the branches, except the Hunho-Antung Branch, were originally constructed by the Chinese Eastern Railway (Russian) with the Russian gauge of 5 feet 2 inches. During the war, the Japanese army, having gained control over a considerable portion of the line, changed the gauge to 3 feet 6 inches, in order to utilize the Japanese rolling stock sent over from Japan. The line was operated with this gauge by the Japanese Government until the present company assumed control in 1907, when the gauge was widened to the American standard of 4 feet 8½ inches. New rolling stock, purchased principally in America and England, was installed, and the line was double-tracked as far as Suchiatun, a distance of 238 miles.

The rolling stock in 1917 was as follows: Locomotives, 270; freight cars, 3,194; passenger cars, 219; total, 3,683.

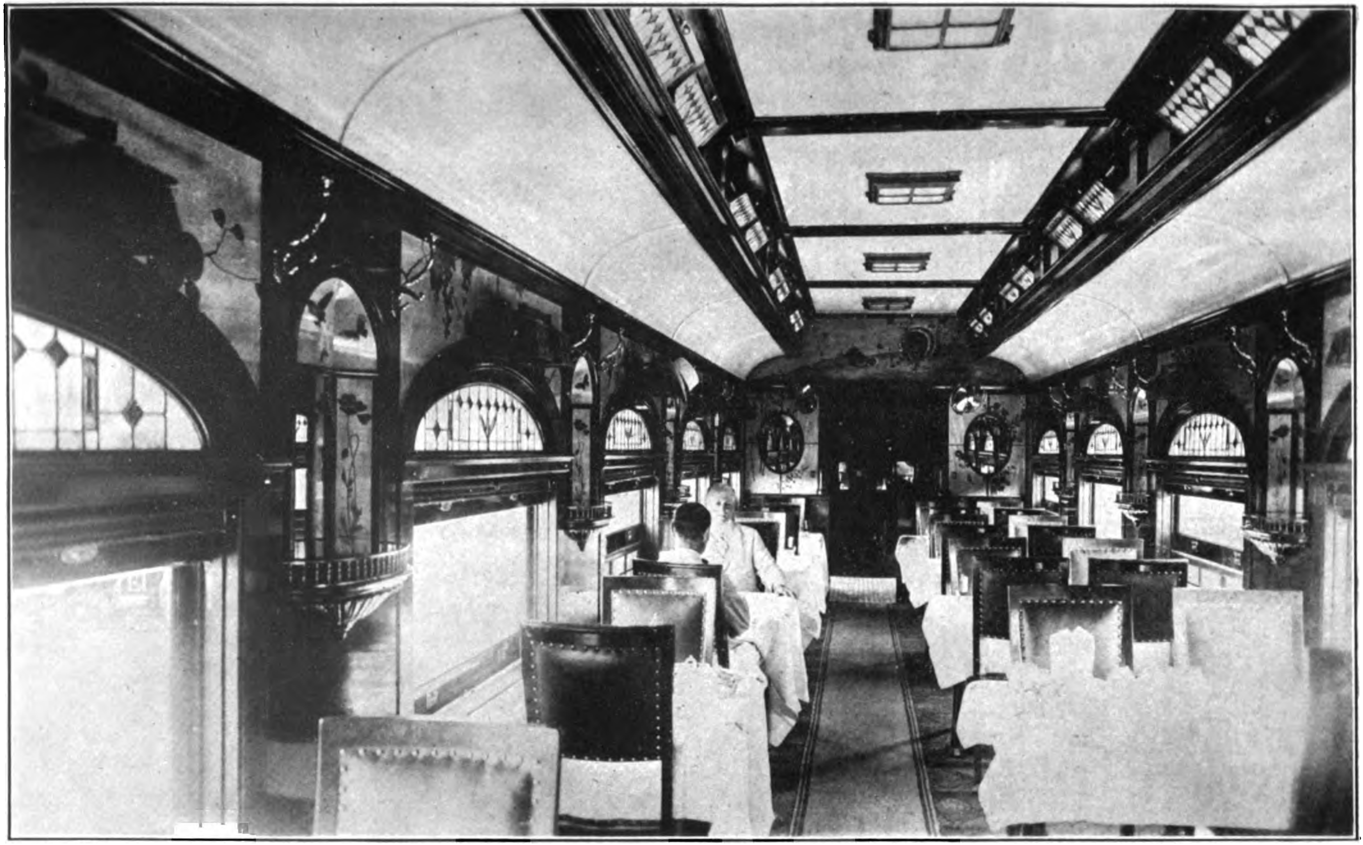
The passenger cars and a large number of the locomotives were wholly or partly built in the United States, while the freight cars are principally of Japanese manufacture. The company has now, however, constructed a large locomotive and car building plant at Shakako, a short distance outside of Dairen, and not only will build all its own cars and locomotives in the future, but proposes to construct rolling stock for the Korean and Chinese lines as well. Therefore, there is little opportunity for American manufacturers to supply the company with locomotives or cars, but there is a considerable market for raw materials, such as high-grade steels, bearing metals, packing, etc. There is considerable market for accessory railway apparatus and supplies, such as lubricators, injectors, air-brake apparatus, wheels, axles, tires, boiler materials, bearing materials, and oils and lubricants. Purchases are usually made by sealed bids, except in special cases.

The passenger fares (except in excursion tickets) are as follows: First class (any train), $0.0302 per mile; second class (express trains), $0.0224 per mile; second class (ordinary trains), $0.0135 per mile; third class (ordinary trains), $0.0090 per mile. Baggage is carried free, up to the following limitations: First class, 132 pounds; second class, 79 pounds; third class, 40 pounds. Excess baggage is charged for at the parcels rate, which varies from $0.38 per 100 pounds for 50 miles, to $1.13 per 100 pounds for 400 miles, depending on the distance carried.

For purposes of adjusting freight rates, goods are classified as follows:

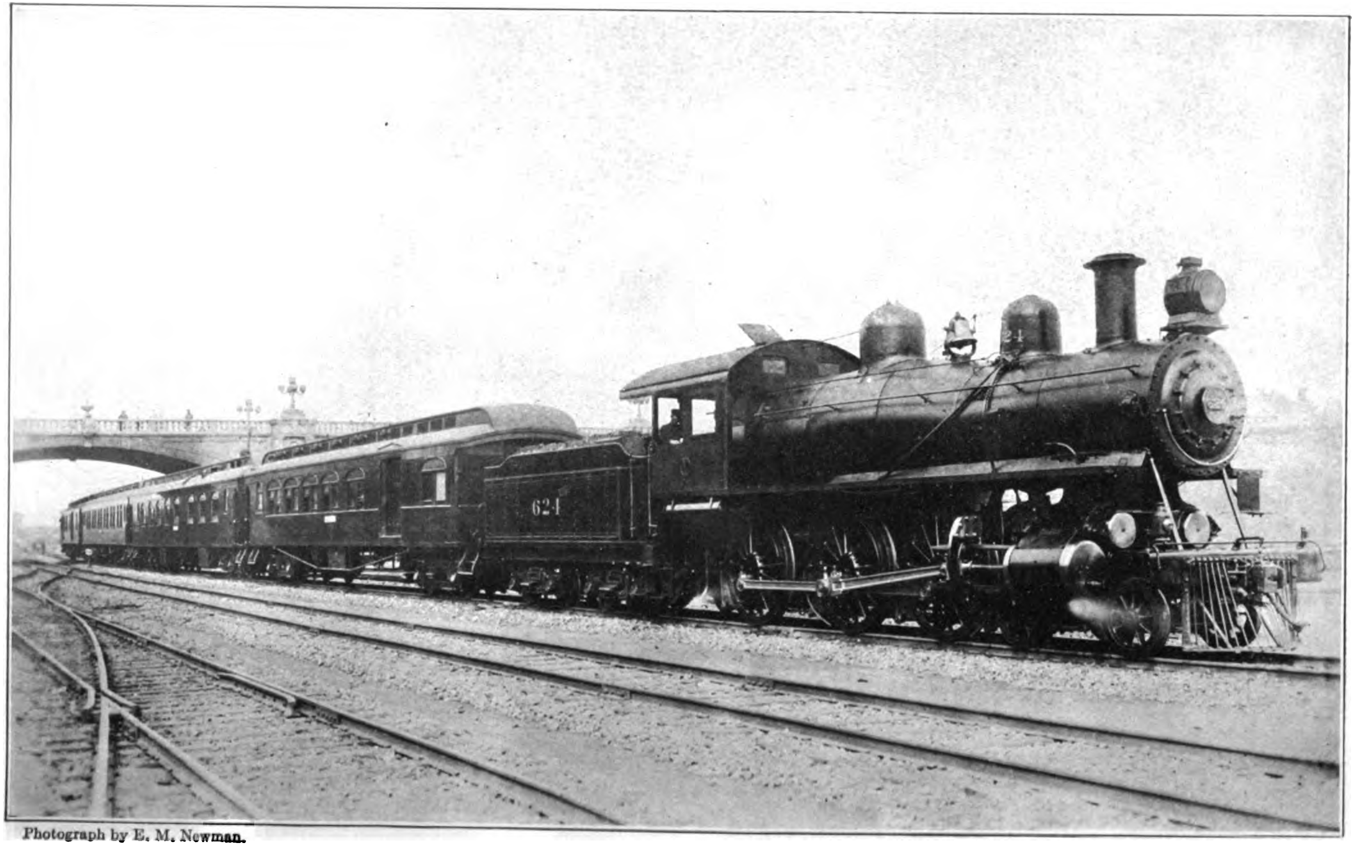
First class.—Fine machinery (bicycles, typewriters, automobiles, etc.), silk and wool clothing, manufactured and raw silk, drugs and chemicals, wines and liquors, objects of art, toys, quicksilver, manufactured furs, mirrors.

Second class.—Arms, weapons, uniforms, beer, manufactured provisions, household furniture and utensils, cotton and leather clothing, cotton cloth and yarn, machinery



Photograph by E. M. Newman.

FIG. 39.—DINING CAR, SOUTH MANCHURIA RAILWAY.



Photograph by E. M. Newman.

FIG. 40.—AMERICAN-BUILT TRAIN IN DAIREN.

and electrical supplies, hides and horns, crude chemicals, brass, antimony, copper, asbestos, paints and dyes, plants, rubber, manufactured lumber, porcelain and glassware, manufactured tobacco.

Third class.—Bean cake, nonalcoholic beverages, vegetables, books, cereals and flours, cloth bags, cordage, raw fibers, dried foodstuffs, earthenware, ornamental stones, iron, steel, tinplate, zinc, lead (partly manufactured), minerals, oils, crude dyes and paints, roofing, salt, crude lumber, leaf tobacco.

Fourth class.—Agricultural implements, bones and bone dust, bran, bricks, lime and cement, fuels (coal, coke, charcoal), grass and straw, earth and sand, fertilizers, fodder, gunny bags, water and ice, raw metals, iron and steel rails, plates and bars, waste paper and rags, unwrought stone.

The rates are as follows:

	First class.	Second class.	Third class.	Fourth class.
Per 100 kin (132 pounds) per mile	$0.002	$0.0017	$0.0012	$0.0008
Per ton per mile (in carload lots)		.0200	.0150	.0100

Over-size goods, dangerous goods, and live animals are in separate classes and have special rates.

The South Manchuria Railway is a governmental concern. The total authorized stock is 200,000,000 yen ($99,700,000), of which the Japanese Imperial Government owns 100,000,000 yen ($49,850,000). Of the remainder, 200,000 shares ($9,970,000), which were floated some time ago among private parties, are fully paid up. A further issue of 400,000 shares ($19,940,000) was floated recently, and of this issue 10 per cent has been paid up. Foreigners are not permitted to own stock in the corporation.

The South Manchuria Railway Co.'s estimates for 1919 contain an item of $13,059,190 for enterprises on the main line. Comparing this amount with $3,862,750 set aside for this line in 1918, it would appear that a good deal of construction and repair work is contemplated.

TRAMWAYS.

The South Manchuria Railway also operates the tramway lines in and about Dairen, the only tramway system in the Kwantung Leased Territory. The total length of the lines in Dairen and the suburbs is 24 miles, and the rolling stock is as follows: Passenger cars, 50; freight cars, 10; water sprinkler, 1.

There is no transfer system, but, in place of transfers, tickets good for 30 minutes or one hour, on any line in the city, are issued. These tickets cost 2½ cents for 30 minutes and 3 cents for one hour. The present lines are quite adequate and no extensions are planned.

STREETS AND ROADS.

The streets of Dairen are broad and well paved and compare favorably with the streets of any city of the size in the world. The roads in the country districts, however, are not surfaced and are very poor. The traffic consists principally of heavy Chinese carts, drawn by two or three donkeys, horses, or oxen, hitched tandem. Although the tires of these carts are 4 to 5 inches broad, they cut up the roads badly, especially during the dry seasons. The Kwantung government has direct supervision over the roads and is gradually carrying out plans for a system of broad, macadamized highways. As yet they have progressed only as far as the broadening and grading of a few sections, but improvements will be made as rapidly as the funds become available.

POSTAL FACILITIES.

All post offices in the Kwantung Leased Territory are under the supervision of the Japanese Imperial Post. There is an office in every town or village of any importance, and the service is rapid and efficient. The mails are as follows: To and from Japan (via Mukden and Chosen), daily; to and from Europe (via Siberia), daily; to and from China (via Chinese Eastern Railway), daily; to and from Shanghai (by steamer), twice weekly; to and from Japan (by steamer), twice weekly.

All mails to and from America pass through Japan and depend on the trans-Pacific lines touching the ports of that country. The usual time of transit from New York is from 30 to 35 days. The ordinary letter postage rate is 5 cents gold or 10 sen gold for the first 20 grams and 3 cents gold or 6 sen gold for every additional 20 grams. There is a parcel-post and money-order agreement with the United States, and parcels and money orders may be sent according to the regulations that obtain in the United States.

In addition to the usual postal facilities the Japanese Imperial Post maintains postal savings banks and is planning to engage in life insurance.

TELEGRAPHS.

The telegraph stations are also operated by the Japanese Imperial Post, and are well distributed throughout the Leased Territory, the principal stations being Dairen, Port Arthur, Chinchow, Liushutun, Pulantien, and Pitsuwo. The rates to any point within the Territory are: For Japanese telegrams, 15 "kana," 20 sen (10 cents), and for each additional 5 "kana" 5 sen (2½ cents); for foreign telegrams, per word, 5 sen (2½ cents). The rates to Japan are: For Japanese telegrams, 15 "kana," 30 sen (15 cents), and for each additional 5 "kana" 5 sen (2½ cents); for foreign telegrams, 5 words, 40 sen (20 cents), and for each additional word 5 sen (2½ cents).

The rate for cablegrams to or from America is the same as that to Japan proper, or $1.33 per word (to New York). There are no direct cables with America, but two cables connect Dairen with Chefoo, in China, and Saseho, in Kyushu (Japan).

TELEPHONES.

The telephone system in the Kwantung Leased Territory is owned and operated by the communications department of the Kwantung government. The number of telephones in each city and the annual rates are as follows: Dairen, 1,560, $42; Port Arthur, 317, $36; Liushutun, 18, $24; Chinchow, 12, $24.

The department also operates, in the same system, 2,143 telephones in the cities along the South Manchuria Railway, but as these are properly in the Mukden and Antung consular districts, they are not included in the above list.

The system used is the usual one, with Japanese "central" girls. A subscriber must pay about $50 to have his telephone installed and a number alloted him.

Practically all telephone and telegraph material and instruments are imported from Japan.

NEWSPAPERS.

The only newspapers in the Leased Territory are those published in Dairen, as follows:

Newspapers.	Language.	Approximate circulation.	Advertising rates.		
			Space.	Rate per day.	Rate per month.
Manshu Nichi-Nichi Shimbun.	Japanese..	10,000	1 line..	From $0.25 to $1.25, depending on type and position.	Large discounts made for term contracts.
Ryoto Shimpo............	...do......	10,000	...do..	.....do..............	Do.
Manchuria Daily News....	English...	2,000	1 inch	$0.50.................	$2.10.
Taito Nippo...............	Chinese...	2,000	....	....	

Practically all Japanese men, and the majority of Japanese women, in Dairen, are able to read. The percentage of Chinese illiterates in the district is not known, but is estimated to be about 50 per cent.

PUBLIC WORKS AND SANITATION.

The conditions in the Chinese cities and towns in the Kwantung Leased Territory are much the same as they are at any place in China. The streets are narrow and ill-kept and there are no sewer or water systems. In the foreign cities of Dairen and Port Arthur, however, the conditions are quite the reverse. The streets are broad, tree-lined, and very well paved. The pavement usually consists of a macadam base of crushed stone, with a surface of fine stone or of fine stone mixed with coal-tar, well rolled down with heavy steam rollers. At night there is an insufficiency of public lights, but as each residence is required to maintain a light above the doorway, the lack of large lights is not noticeable. Water and electric light connections are made with every residence and business building. There is a sewage system (single), but it is used to carry away only waste water. Night soil is removed by carts and used as a fertilizer on the fields. The Kwantung government maintains fire brigades at both Dairen and Port Arthur, with steam engines, hook-and-ladder companies, and chemical wagons. At Dairen there is also an efficient fire brigade maintained by the South Manchuria Railway Co.

The only electric light and power plant in Dairen is owned and operated by the South Manchuria Railway Co. and, like the railway, is a semi-governmental organization. The plant is operated by steam, and current is supplied for lights, street railways, and factories. The machinery is principally German, and consequently the voltages differ from those ordinarily used in the United States. The total capacity of the plant is 4,500 kilowatts, alternating current, and 400 kilowatts, direct current. The alternating current is 25-cycle and is adapted to three-phase motors at the following voltages: 10 horsepower, 100 volts; 15 horsepower, 200 volts; 50 horsepower and over, 2,000 volts.

The direct current is supplied to motors at from 230 to 250 volts.

The price for current varies from $0.10 per kilowatt hour, for one kilowatt hour per month, to $0.025 per kilowatt hour, if 200 kilowatt hours or more are contracted for per month.

The charges for lighting current (alternating) are $0.10 per kilowatt hour, with a minimum of $0.15 per light per month, irrespective of the size of the light.

The Kwantung government operates a small steam electric plant at Port Arthur, for the purpose, principally, of supplying current for lights in the government buildings, barracks, and city residences. As this current is not used to any extent for industrial purposes, details will be omitted. No extensions or improvements are planned for either of these plants.

The waterworks of Dairen, owned and operated by the Kwantung government, have been, hitherto, sadly inadequate for the uses of the rapidly growing city. During the dry seasons, water is turned into the pipes only 12 hours out of the day. The plant is situated on the Holan River, about 3¼ miles west of Dairen. Water is pumped from the river during the rainy seasons and from wells sunk to the bedrock in the river bed during the dry season. Before passing into the pipes, the water is allowed to settle in a tank containing 4,488,000 gallons, from which it passes through a sand-filter of 860,640 gallons capacity. From the filter the water is pumped into two reservoirs, 193 feet above sea level, with a combined capacity of 1,612,800 gallons. The water is then carried by gravity to Dairen. In 1914 a water famine threatened the city and extensions of the waterworks were planned, which, it is estimated, will supply enough water for a city of 150,000 people, or about double the present population. The extensions are to consist of a large concrete dam (forming a reservoir of 1,149,318,000 gallons, and to cost $210,000) and the necessary pipe lines and pumping plants. The dam has been under construction, and was expected to be finished by 1919.

The rate for water is $0.05 per cubic meter (264.17 gallons), with a minimum charge of $0.10 per month per faucet.

TREATY PORTS AND FOREIGN CONCESSIONS.

Dairen and Port Arthur are free ports, and foreigners have the right of residence and of trading at any place in the Leased Territory. The declared policy of the Japanese Government is to make South Manchuria a great commercial and industrial center, with equal opportunities for all nations. In pursuance of this policy, there are no preferential railway rates, customs charges, or land or income taxes.

There are, in Dairen, three consulates—American, British, and Russian. The British consulate is a large, well-built structure owned by the British Government, situated in the Central Circle, in the heart of the city. The American consulate is in a rented building situated on Echigo-cho.

As is natural, a large majority of the business houses in Dairen are Japanese. Of foreign firms, there are nine English, two American, one Greek, and two Russian. The American houses are branch offices, managed by British and Japanese subjects. There are, at the present time, no American business men located in Dairen, and no American general export and import houses. This is, of course, a great drawback to American trade, and the fact that American cotton goods and American flour have lost their former predominant position in Manchuria is partly due to the fact that there are no Americans on the ground to press their sale.

FINANCE AND BANKING.

The currency in use in the Kwantung Leased Territory consists of gold and silver yen notes, issued by governmental and private banks. The principal issues are Bank of Japan gold yen notes, Yokohama Specie Bank gold yen notes, Bank of Chosen gold yen notes, and Yokohama Specie Bank silver yen notes.

These notes are all issued in denominations of 100 yen, 10 yen, 5 yen, and 1 yen. In addition, the silver, nickel, and copper coins of Japan and the small silver and copper coins of China are in circulation. Transactions between merchants in Dairen and merchants in Japan are usually carried on in gold yen, while transactions between Dairen merchants and Chinese merchants are in silver yen. Market prices in Dairen are quoted in silver yen, but valuations in the Chinese Maritime Customs are made in the Haikwan tael and are usually converted into silver yen for the convenience of the importers. The present extraordinarily high value of the silver-basis currency is due to the high price of silver. The violent fluctuations in the value of the silver currency offer the chief difficulty to business transactions with Chinese merchants in the Dairen district. The ability of the Chinese to purchase depends largely on the value of their money, and foreign merchants there are often confronted with long periods of inaction because of a fall in the value of the silver currency.

Bank interest rates are not fixed, but, like call loans in American cities, depend on the demand for money. The usual rates, however, are as follows: Accounts in gold yen—Fixed deposits, 4.5 to 6 per cent per anum; current accounts, 1.825 to 2.92 per cent per annum. Accounts in silver yen—Fixed deposits, 4 to 5 per cent per annum; current accounts, 1.825 to 2.19 per cent per annum. The interest on current accounts is calculated on daily balances. Overdrafts are charged at the rate of from 7.3 to 14.6 per cent per annum, on daily balances. The rates of interest on loans depend on the demand for money and on the character of the security, or the personal credit of the borrower, but they usually are from 7 to 15 per cent per annum.

The banks in the Kwantung Leased Territory are:

Yokohama Specie Bank (Japanese).
Hongkong & Shanghai Banking Corporation (British).
Russo-Asiatic Bank (Russian).
Shoryu-Ginko (Japanese).
Chosen-Ginko (Japanese).
Dairen-Ginko (Japanese).
Chuoku-Ginko (Chinese).
Lungkou-Ginko (Japanese).

The first two banks listed have branches in the United States and are prepared to negotiate, directly, all drafts and bills of exchange drawn between the two countries. The other banks also undertake bills of exchange on the United States, through their correspondents in Yokohama and San Francisco or Seattle, though their business is usually confined to Manchuria or other parts of China. There are no small Chinese banks doing business among the farmers, in the Kwantung Territory.

The International Banking Corporation (American) has in contemplation the establishment of a branch at Dairen.

MANUFACTURING AND OTHER INDUSTRIES.

The products of South Manchuria are essentially agricultural and mineral, and the industries of the Kwantung Leased Territory are necessarily restricted to the refining of these crude products. The most important industries are, therefore, the manufacture of bean oil and bean cake, "soy" brewing, and salt and cement manufacturing. These industries have all sprung up within the past 14 years, since the Japanese occupation of the Territory. Previous to that time a small amount of bean oil was extracted by Chinese, with crude machinery, but its production on a large scale, with modern power-machinery, has been developed by the Japanese since 1906.

Bean-oil and bean-cake manufacturing affords the most promising industry in South Manchuria. The oil extracted from the soya bean has been in use for many centuries by the Chinese for food and for lighting purposes, but it was not well known in Occidental countries until 1908, when a trial shipment of the beans was sent to England. The value of the bean oil, as a substitute for cotton-seed and linseed oil, in soap making and for lubricating, was quickly recognized, and the export of beans and, more recently, of bean oil and bean cake is growing rapidly. The cake is used for fodder for cattle and as a fertilizer.

The Chinese still operate 42 small bean mills for the production of bean oil and bean cake. Their combined capital amounted to $633,942 and the total output was $3, 301, 224, in 1914. While some of their products are sold directly to merchants in China, the greatest part is sold through Japanese and foreign commission merchants in Dairen.

The principal Japanese industries, with their capitalization and output at the end of 1914, were:

Industries.	Number of mills.	Capitalization.	Output.
Bean oil and cake	4	$675,468	$1,470,261
Cement	1	498,500	278,163
Bricks	7	132,850	58,513
Soy	4	28,913	62,398
Soaps (bean oil)	3	15,454	41,813
Rice polishing	1	49,850	49,850
Bone dust	1	8,973	35,892
Tiles	1	26,421	14,398
Salt	2	1,058,626	185,741
Dockyard	1	4,985,000	49,850
Ironworks	4	16,949	64,805
Ice	1	29,910	21,514
Cakes	1	9,970	30,880

The bean oil and bean cake, soy, soap, cement, and bone dust are manufactured chiefly for export. Bean oil and bean cake find their markets all over the world, while the soy, soap, cement, and bone dust trade is confined principally to the Far East. The beans used are usually produced in South Manchuria, though during recent years some soya beans have been shipped to Dairen from as far as Harbin. Soy (a salty sauce largely used by Chinese and Japanese) is also made from certain varieties of the Manchurian soya bean. Bean oil is also the basis of the soap produced by the factories listed above.

A new process of bean-oil extraction by solution in benzine was recently tried out by the South Manchuria Railway Co., but was not a complete success. The mill has, however, been taken over by a Japanese capitalist, who expects, by greatly enlarging the mill and increasing the output, to make it a paying undertaking.

The salt industry has grown largely within the past few years, and recently the three small producing companies were combined under the name of the Japan Salt Manufacturing Co. The process used is that of evaporation of the sea water by the sun. There are two factories for refining the salt, which is nearly all used locally for preserving fish.

In addition to the industries mentioned above, the South Manchuria Railway Co. has built and is now operating an extensive iron-working, car and locomotive building, and machinery-manufacturing plant at Shakako, a short distance outside of Darien. The plant is capitalized at $3,006,370 and the output in 1914 was $1,218,616; 2,311 men (Japanese and Chinese) are employed in the shops, and a model city has been erected for their use. The company has undertaken to manufacture, besides railway equipment, all sorts of agricultural and industrial machinery.

An industry which is at present neglected in the Leased Territory, but which will undoubtedly become important in the future, is that of silk spinning. About 4,500,000,000 wild silk cocoons are gathered annually in Manchuria, and at the present time these are shipped principally to Antung, Chefoo, and other Chinese ports. Experiments are now being made regarding the best methods of weaving and dyeing this silk, and if it is found practicable, experimental factories will be started.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the port of Dairen during the years 1908, 1913, and 1918:

Imports and exports.	1908	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$11,569,109	$21,325,289	$79,906,694
From Chinese ports	1,133,214	2,816,390	10,515,978
Total foreign imports	12,702,323	24,141,679	90,422,672
Reexports of foreign goods:			
To foreign countries and Hongkong	201,845	376,343	4,695,338
To Chinese ports	86,929	2,192,917	3,743,960
Total foreign reexports	288,774	2,569,260	8,439,298
Net total foreign imports	12,413,549	21,572,419	81,983,374
Imports of Chinese products	923,585	3,349,825	23,630,417

Imports and exports.	1908	1913	1918
Reexports of Chinese products:			
To foreign countries and Hongkong		$195,565	$10,244,088
To Chinese ports		18,711	154,614
Total Chinese reexports		214,276	10,398,702
Net total Chinese imports	$923,585	3,135,519	13.231,715
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	4,934,094	22,073,788	86,360,366
To Chinese ports	3,406,457	6,899,637	16,252,825
Total exports of local origin	8,340,551	28,973,425	102,613,191
Gross value of the trade of the port	21,966,459	56,461,929	216.666,280
Net value of the trade of the port	21,677,685	53,681,393	197,828,280

EXPORT TRADE.

As is evident from the table, the exports of the Kwantung Leased Territory have grown hugely during the Japanese administration—that is, since 1905. The opening of the country to industrial development, the extension of railway and steamship facilities, the establishment of banks and modern produce exchanges, and the growing importance of the bean-oil and bean-cake industries have been the principal contributing factors. The South Manchuria Railway offers excellent inducements for shippers from all of Manchuria to send out their produce via Dairen, while the five steamship lines with 14 vessels, having Dairen as a port of call, furnish means for distributing the produce to all parts of the world. Ocean-going vessels can enter the deep-water docks, and freight is easily and quickly handled. The only drawbacks to the export trade consist of the Chinese Maritime Customs export tax on goods originating in the Chinese territory of Manchuria, and the constantly fluctuating value of the silver yen and the Chinese coins.

Native products, such as beans, kaoliang, sesame seed, ginseng, maize, and wild silk, are bought in by Japanese or Chinese brokers (who often have liens on the crops), are collected at the various railway stations along the South Manchuria Railway and are forwarded to Dairen, where they are stored in warehouses until such time as they may be shipped.

Bean oil and bean cake are now stored and financed under what is called the "mixed storage" system. The South Manchuria Railway Co. provides warehouses and tanks, in which the oil and cake are placed as rapidly as produced. The producer (either Chinese or Japanese) gets a certificate of deposit for the amount of oil or cake placed in the general storage, and this certificate may be sold outright or may be used as collateral for loans from the banks. In this way the bean mills are enabled to run continuously on small capital and do not have a large amount of money tied up in produce awaiting shipment. As the oil is of a standard grade and the cakes all of a certain weight, the system has been quite successful. The only drawback so far has been found in the fact that cakes which lie in storage for some time before shipment lose several pounds in weight and therefore cause a considerable loss to the railway company.

The principal articles of export (not including reexports) to foreign countries and Chinese ports, with quantities and values, according to the Chinese Maritime Customs Returns (the only accurate tables of statistics), are shown in the following table for the years 1908, 1913, and 1918:

Articles.	1908		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Bean cake.....tons..	210,472	$2,182,335	563,966	$12,428,335	977,539	$32,187,236
Bean oil.....do....	3,906	196,397	38,714	3,093,778	137,521	27,119,645
Beans.....do....	220,377	3,776,397	165,216	4,592,255	371,561	16,562,872
Cement.....do....	.....	.....	19,525	195,055	11,111	198,834
Coal.....do....	9,821	29,699	1,003,054	3,036,605	602,961	3,956,349
Hemp seed.....do....	.....	.....	16,822	357,105	3,860	151,964
Kaoliang.....do....	.....	.....	26,615	444,346	58,507	1,926,442
Millet.....do....	.....	.....	48,276	1,375,517	7,797	341,851
Perilla Nankinensis.....do....	.....	.....	5,080	184,312	6,033	431,880
Sesame.....do....	2,026	80,651	2,236	178,225	494	43,357
Silk:						
Cocoons, wild.....pounds..	1,538,800	93,063	5,872,667	337,257	12,191,733	1,881,140
Raw, wild.....do....	1,360,933	1,714,713	1,106,400	1,280,680	1,147,338	3,582,835
Soap.....tons..	.....	.....	382	2,622	.....	19,970
Tobacco, leaf.....do....	139	9,117	837	102,449	84	19,725
All other articles.....	.....	258,179	.....	1,364,884	.....	14,189,091
Total.....	.....	8,340,551	.....	28,973,425	.....	102,613,191

The following table shows, by quantity and value, the articles invoiced at the Dairen consulate for exportation to the United States and the Philippine Islands during the calendar years 1917 and 1918:

Articles.	1917		1918	
	Quantity.	Value.	Quantity.	Value.
TO UNITED STATES.				
Bristles.....pounds..	3,200	$3,975	.....	.....
Castor oil.....do....	442,500	66,556	1,247,000	$298,932
Castor seed.....bushels of 50 pounds..	51,368	126,892	.....	.....
Furs, assorted.....pieces..	243,327	128,171	.....	.....
Hempseed oil.....pounds..	.....	.....	1,222,550	187,352
Horse mane.....do....	.....	.....	46,594	11,451
Horse tail (hair).....do....	31,834	23,123	.....	.....
Kaoliang (sorghum).....do....	2,000,000	31,231	.....	.....
Peanut oil.....do....	46,200	6,896	1,439,111	221,072
Peanuts.....do....	50,000	3,527	.....	.....
Perilla oil.....do....	.....	.....	415,800	77,186
Sheep intestines.....do....	1,620	1,200	.....	.....
Skin, tiger.....piece..	1	137	.....	.....
Soya bean cake.....pounds..	2,240,000	31,763	.....	.....
Soya bean oil.....do....	198,534,626	19,740,641	257,863,427	36,496,060
Soya beans.....do....	34,011,520	1,024,460	.....	.....
Sulphate of ammonia.....do....	11,200	629	.....	.....
White beans.....bushels of 60 pounds..	.....	.....	1,667	9,347
Total.....	.....	21,189,191	.....	37,301,400
TO PHILIPPINE ISLANDS.				
Coal.....tons..	48,910	239,778	41,590	218,517
Muriatic acid.....pounds..	.....	.....	28,800	1,914
Red beans.....bushels of 60 pounds..	.....	.....	983	1,167
Soy, Japanese.....gallons..	.....	.....	648	216
Sulphate of ammonia.....pounds..	.....	.....	49,280	5,793
Sulphuric acid.....do....	.....	.....	160,000	6,238
Vermicelli, Chinese.....do....	.....	.....	19,733	852
Total.....	.....	239,778	.....	234,697

In 1913, the last normal year before the beginning of the war, the declared exports to the United States from Dairen were: Bean oil, 5,925,000 pounds, valued at $334,689; hempseed, 870,534 pounds, valued at $20,629; kaoliang, $4,332; maize, $3,451; perilla seeds, 4,670 pounds, valued at $149; total, $363,250. Exports to the Philippines were: Cement, $1,247; coal, 54,670 tons, valued at $209,032; total, $210,279.

Beans are sold by the picul (132.27 pounds) and are packed in gunny or cloth bags, containing about 200 pounds each. The yellow soya and the white-eye soya are the principal beans exported, and no distinction is made in the grade. The beans are gathered in September, hulled at the farm, and carted to the railway stations, usually during the winter months, when the roads are frozen hard. At Dairen they are either manufactured into bean oil and bean cake, or are shipped to other countries for the same purpose.

At Dairen there is a bean exchange, like the wheat exchange in Chicago, where beans, bean oil, and bean cake are dealt in, either as "spot" deals or "futures." The price of beans varies yearly, according to the crop and the market.

Bean oil is sold by the picul, and is packed in cases containing two 5-gallon tins (like kerosene oil), in drums containing various amounts up to 750 gallons, and in barrels. There is but one standard grade. The oil is used as a substitute for cottonseed oil and linseed oil, and is especially useful in soap making. There is a process (as yet in the experimental stage) for hardening the oil by the addition of a hydrogen compound, the hardened oil to be used in place of wax or paraffin for candle making. The bean mills usually run throughout the year, unless there is no demand for oil or the supply of beans runs short, when they close during the summer months. Bean oil has shown a tendency to increase in price in recent years, as a result of the increased demand.

The trade in bean oil with the United States has grown rapidly. In consequence of a short cottonseed-oil crop in 1915, American manufacturers turned to bean oil as a substitute, and in 1916 two cargo steamers, loaded almost entirely with bean oil and linseed, left Dairen direct for America—the first cases of the kind in the history of the port. In 1918 Dairen shipped to the United States more than $36,000,000 worth of bean oil.

Bean cake is sold by the piece, and is usually not packed for export, the cakes being sufficiently firm to stand shipment unpacked. Each cake weighs 61.3 pounds, as it comes from the mill, but is likely to lose a few pounds by evaporation of the water before it reaches its destination. The cake is an excellent fertilizer for rice and sugar-cane fields, and is largely used for this purpose throughout Japan and Taiwan (Formosa). The cake is dissolved in water and spread on the field in a liquid state. The price of bean cake has not shown any marked tendency to rise or fall during the past decade, though considerable variations are experienced in different years, as a result of the changing demand among the Japanese farmers, according to their ability to purchase.

When the benzine process of oil extraction is used, the residue, instead of being cakes, is a bean meal. This is said to be an excellent fodder for cattle, and a considerable trade may be developed in this article.

Coal, mined at Fushun, near Mukden, is exported principally to Moji, in Japan, and to the Philippine Islands. The trade in coal depends largely on the supply of vessels to carry it, and during the war, because of the scarcity of bottoms and the consequent high freight rates, the trade fell off considerably.

The cereals, such as maize, kaoliang, and millet, are exported almost entirely to Chinese ports. They are sold by the picul, and the price varies greatly, depending on the demand in China and the size of the crop in Manchuria.

Wild silk is principally exported to Chefoo and Antung. This so-called wild silk is silk from wild cocoons, which have been pierced by the escaping moths. It is used in the manufacture of "tussah" or "pongee" silk.

IMPORT TRADE.

Imports from foreign countries into the Kwantung Leased Territory, though by no means keeping pace with the exports, nevertheless show a notable growth, as is evidenced by the following figures: 1908, $11,569,109; 1909, $7,637,487; 1910, $11,968,441; 1911, $17,047,449; 1912, $19,381,972; 1913, $21,325,289; 1914, $20,195,204; 1915, $15,217,657; 1916, $27,630,596; 1917, $62,936,457; 1918, $79,906,694.

These imports, in 1917, came from the following countries: Japan (including Formosa and Chosen), 80 per cent; Russia (Pacific ports), 3⅓ per cent; United States (including Philippines), 9 per cent; Great Britain (including Hongkong), 5⅓ per cent; other countries, 2⅓ per cent.

The principal factors causing the increase in the import trade are (1) the improvement of distribution facilities, and (2) the increasing consumption of foreign goods by the Chinese. In addition to the extensive improvement in railway facilities, the Japanese merchants have established resident selling and distributing agencies in every city and town of South Manchuria, and have been reasonably successful in placing their wares with Chinese merchants. The Manchurian Chinese are very conservative, but they are gradually learning to use foreign goods. The falling off in the import trade during 1915 is attributable to a variety of causes, the most important being the low price of silver at that time, the depression in the building trade, and the Chinese attitude toward certain foreign goods during 1915.

Goods destined for the interior of Manchuria can be unloaded at the Dairen docks, placed there upon freight cars, and sent directly to the nearest station on any of the railway lines of the South Manchuria Railway. Goods billed to stations on the Chinese Eastern Railway or the Peking-Mukden Line must be transshipped at Changchun or at Mukden. Extra charges are made for transshipment. The extra charges, per 500 pounds, for goods billed to stations other than South Manchuria Railway stations are as follows:

Unloading from vessel	$0.0450
Station charges at Dairen	.1000
Loading into cars at Dairen	.0286
Transshipment at junctions	.0571
Unloading from cars	.0143
Incidental charges	.0357
Total	.2807

These charges vary somewhat, depending on the class of the goods and the quantity in which they are shipped.

The larger Japanese firms are willing to establish credits in the United States against orders, and will accept goods f. o. b. the point of origin. Smaller Japanese and Chinese merchants, however, usually require prices quoted c. i. f. Dairen or Kobe, with 30 or 60 days' time. The usual procedure is to draw on the consignee for the agreed amount, the draft accompanying the shipping documents. The comprador system is not ordinarily used by Japanese firms, though foreign firms still generally employ compradors.

As it is usually necessary for goods to be transported from the railway points to their ultimate destinations in springless Chinese carts, merchandise that is liable to breakage or can be damaged in any other way should be carefully packed in strong boxes.

The principal articles of import from foreign countries, with their quantities and values, are shown in the table below. Cotton goods, flour, machinery, kerosene oil, tobacco, and wax are the most important imports as regards American trade. As a large part of these goods are imported through Japanese jobbers in Yokohama and Kobe, it is difficult to state what percentages come from the various countries.

Articles.	1908		1913		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Cigarettes, cigars, and tobacco, leaf and prepared		$253,970		$350,415		$2,420,220
Cotton goods		681,078		6,595,787		14,562,096
Flour.....tons	9,042	367,327	24,912	1,476,568	(a)	(a)
Gunny bags.....number	1,176,571	73,658	4,404,265	338,080	13,676,344	2,154,002
Iron and steel.....tons	9,059	477,801	25,292	1,248,575	64,215	11,277,748
Machinery		386,497		387,655		2,647,461
Matches.....gross	176,727	30,194	1,346,596	301,496	1,238,161	450,975
Oil (kerosene).....gallons	361,099	30,775	6,430,215	538,575	5,085,320	1,616,331
Opium.....pounds			8,892	90,308	37,081	477.646
Rice.....tons	14,469	656,320	15,338	853,578	16,084	1,439,098
Sugar.....do	1,574	76,670	10,603	616,291	58,456	7,169,701
Wax, paraffin.....do					38	8,146
All other articles		8,534,819		8,527,961		35,683,270
Total		11,569,109		21,325,289		79,906,694

a Figures do not appear in Maritime Customs Returns.

American cotton goods at one time dominated the Manchurian market, but at present, because of the keen competition of Japanese and English goods, American cloth has been nearly driven off the market. The trade in the better class of cotton cloth might be recaptured by the American dealers, but it would be necessary to have resident agents scattered throughout Manchuria. American flour, like cotton cloth, has practically disappeared from the Manchurian market. This is attributed to the fact that the price of flour in the United States has risen greatly, as a result of the demand in Europe, and consequently inferior Chinese flour has occupied the market.

Iron and steel and machinery imports from the United States have maintained their positions. The large iron works erected by the South Manchuria Railway Co. at Shakako, near Dairen, is now prepared to build all sorts of machinery and in the future will probably cut into the American trade seriously. However, by close attention to the demand and by careful bidding, American machinery manufacturers should be able to maintain an interest in the market. The kerosene-oil and paraffin-wax trade is practically controlled in Manchuria, as in all China, by one American company. In the tobacco and cigarette trade there is strong competition between the To-a Tobacco Co. (a subsidiary of the Japanese Imperial Tobacco Monopoly Bureau) and the British-American Tobacco Co., a semi-American concern. The To-a Co. now controls the market for low-grade, cheap cigarettes, made of Japanese and American tobacco mixed, such as are smoked by the coolies, but the British-American Co. still maintains its supremacy in the trade in high-grade cigarettes, cigars, and tobacco.

Upon written application, accompanied by the shipping documents, the South Manchuria Railway Co. will undertake to pass imports through the Chinese Maritime Customs. In order to facilitate this, the following suggestions will be of value:

(1) Cases and packages should be numbered, the numbers to serve as guides to the entries in the invoice.

(2) Miscellaneous articles, in cases, should be described separately and completely, with quantities and value.

(3) Handkerchiefs, towels, etc., should have the kinds and quantities, either by the dozen or roll, mentioned, together with their widths and lengths. Drills, calicoes, etc., should have the weights per roll given in pounds.

(4) Goods composed of cotton and wool, or silk and cotton, mixed, should have the respective percentages of each mentioned.

(5) Liquors in casks should be given in gallons, and liquors in bottles should be given in dozens, with the quantity per bottle.

(6) Canned goods should have the contents, value, and weight of each can given, together with the total number of cans.

It should be stated in the application that all matters relating to the customs procedure are intrusted to the railway company on the owner's responsibility.

In order to obtain a proper share in the trade of the Kwantung Leased Territory, it is necessary for American manufacturers to have agents there who will be able to push properly the sale of the goods. The sale of American goods has been greatly handicapped in the past by the fact that there is not one American general exporting and importing concern in the Leased Territory. There are several British and hundreds of Japanese firms, and, as a result, American goods are not only being crowded out of the market whenever British or Japanese articles can be substituted, but the jobbing trade is now largely in the hands of the Japanese. It is almost absolutely necessary to have selling agents, preferably Americans, on the spot, in order to regain or retain our trade in cotton goods, flour, and machinery.

SHIPPING FACILITIES.

The harbor of Dairen, in the Bay of Talien, is a semi-artificial one, well protected by stone breakwaters. Within the breakwaters are quays, owned and operated by the South Manchuria Railway Co., with a berthing space of 5,470 feet and a depth of from 24 to 30 feet, capable of accommodating 15 vessels of from 2,000 to 5,000 tons each. Five hundred and forty feet of the east quay is used as a coaling station, and three vessels of 2,000 tons each can be coaled simultaneously. Coaling is done by coolie labor, and has been found satisfactory and cheap. A new quay was completed in 1917, adding 1,495 feet of quay line. Loading and unloading is usually done by coolie labor, though there are large power cranes for heavy work, capable of handling pieces of from 25 to 50 tons weight. There is one dry dock, owned by the Kawasaki Dockyard Co., with a length of 430 feet, a breadth of 52 feet, and a depth of 25 feet, capable of accommodating vessels up to 5,000 tons.

Warehouses are situated on the wharf, and the railway has tracks laid alongside the warehouses, so that goods may be moved directly from the ships to the cars. The warehouses have a floor space of 1,114,000 square feet, and are capable of storing 130,000 tons of cargo at a time.

The harbor dues are as follows:

Vessels of not more than 1,000 tons	$7.50
Vessels of not more than 1,500 tons	12.50
Vessels of not more than 3,000 tons	20.00
Vessels of not more than 5,000 tons	27.50
Vessels of more than 5,000 tons	32.50

These fees include pilotage dues. The regulations require vessels of over 1,000 tons to pick up a pilot on entering the breakwater.

Port Arthur possesses a deep-water quay, but as the harbor was closed to merchant ships until 1910, all commerce was diverted to Dairen, and at present it is practically used only by Japanese warships as a naval base, except for a few Chinese junks that carry supplies to the native residents.

The steamship lines with ocean-going vessels calling regularly at Dairen are as follows:

- Osaka Shosen Kaisha:
  - Dairen-Kobe (via Moji); twice a week; four vessels.
  - Dairen-Nagasaki (via Korean ports); monthly; one vessel.
  - Tientsin-Takao (Formosa) (via Dairen and Chinese ports); thrice a month; three vessels.
- Nippon Yusen Kaisha:
  - Newchwang (China)-Yokohama (via Dairen, Tientsin, Chemulpo, Kobe); thrice a month; three vessels.
- South Manchuria Railway Co.:
  - Dairen-Shanghai (via Tsingtau); twice a week; two vessels.

Before the war, the Hamburg-American Line operated two vessels between Shanghai and Dairen, via Tsingtau. It is not known whether this line will again be operated after the war.

In addition to the services listed above, passenger and freight vessels from the following lines occasionally call at the port: Ocean Steamship Co., China Navigation Co., Indo-China Steam Navigation Co., Glen Line, Shire Line, Royal Mail Steam Packet Co., Indra Line, and Bucknall Steamship Co. Altogether, 3,394 steamers, with a total tonnage of 3,490,446, entered and cleared from the port of Dairen in 1917. There were also 22,984 sea-going junks (Chinese) and 539 sailing vessels (foreign style) entered and cleared in 1917.

As will be noticed, there are no American steamship lines represented in the above lists. It is therefore necessary for the American shipper to send his cargo to Yokohama or Kobe and have it transshipped there to one of the Japanese lines to be forwarded to Dairen, unless, of course, a full cargo can be made up and sent directly to Dairen by a tramp steamer.

The war had a serious effect upon the shipping trade of Dairen. The withdrawal of the English and American lines of steamers from the Pacific trade and the utilization of the larger part of the tramp steamers in the munitions-carrying trade caused many of the boats that had previously visited Dairen to be put on the more profitable trans-Pacific and European trade routes. At the same time, freight rates increased so heavily that it did not pay to ship the comparatively low-priced beans and bean cake. As a result, at one time the amount of bean cake piled up on the wharves at Dairen awaiting shipment was so great that the warehouses could not contain it all, and immense quantities were stored under tarpaulins and improvised shelters. The regular boats, however, have been taking full cargoes out every trip, and at present the congestion is relieved.

The principal shipping and forwarding agents in Dairen are:

Osaka Shosen Kaisha, Oyama-dori.
Mitsui Bussan Kaisha, Yamagata-dori.
Maruki Shokai, Kambu-dori.
Yamaguchi Unyu Koshi, Kambu-dori.
Dairen Kisen Kaisha, Yamagata-dori.

FACILITIES FOR TRAVEL.

The principal foreign-style hotel in Dairen is the Yamato Hotel, under the management of the South Manchuria Railway. It is a first-class hotel in every respect, with all modern improvements, including hot and cold running water in the rooms, attached bathrooms (if desired), elevators, roof-gardens, etc. The cuisine is good and the rates are reasonable. Rooms cost from 2.75 yen ($1.37) per day up, while the rates for table d'hôte meals are: Breakfast, 1 yen ($0.50); luncheon, 1.50 yen ($0.75); dinner, 1.75 yen ($0.87). Monthly rates are from 135 yen ($67.50) to 165 yen ($82.50), including room and meals.

Other hotels in Dairen include two small Russian hotels and one large Japanese-style hotel, the Ryoto.

The South Manchuria Railway also maintains a hotel in Port Arthur, also called the Yamato Hotel, which, though much smaller than the hotel in Dairen and without modern improvements, is nevertheless quite comfortable. There are also comfortable hotels and furnished bungalows in the summer resorts of Hoshigaura (Star Beach), near Dairen; Rokotan, also near Dairen; and Golden Beach, near Port Arthur. The hotel and bungalows at Hoshigaura are also under the management of the South Manchuria Railway, and rates may be had upon application.

The best seasons of the year in Dairen and the surrounding country are, as might be expected, the late spring and early autumn. Many residents of South China, however, are now spending the summer at Dairen and the surrounding seaside resorts. While some hot days are experienced, there is, as a rule, a refreshing sea breeze at the beaches.

The passenger accommodations on the South Manchuria trains are generally good. Before the war three fast express trains weekly were operated between Dairen and Changchun, composed only of first and second class sleepers and dining cars. At present, this train runs only once a week, on Thursdays. There are also two daily trains between Dairen and Changchun, one of which carries sleepers. Connections are made at Mukden with the Chosen-Manchuria Express trains, which run thrice weekly, leaving Mukden on Tuesday, Friday, and Saturday, and Antung on Sunday, Wednesday, and Thursday. These trains connect at Antung with the Chosen Railway trains running to Fusan, where boats for Shimonoseki await the passengers. In short, the Japanese railway authorities have arranged through express train services between Tokyo and Dairen or Changchun, so that passengers need to purchase but one ticket and can have their baggage checked through to their destination.

The steamship lines offering the best passenger accommodations are the Osaka Shosen Kaisha's Kobe-Dairen line and the railway company's Shanghai-Dairen line. The Kobe-Dairen steamers are of 2,500 to 5,000 tons, and offer good cabins and European food. The Shanghai-Dairen steamers are the *Sakaki Maru*, turbine-driven, 3,876 tons, and the *Kobe Maru*, 2,877 tons. European cabins and European food are offered on both steamers. The smaller boats of the coasting lines have passenger accommodations and can furnish foreign food if wanted.

Visitors to the Leased Territory should not plan to arrive before May, as spring is usually late in coming and green leaves do not appear before that time. It is well to bring some warm clothing, as there are chilly days even in May and June. Hunting, golf, and tennis are to be had, so the visitor fond of these sports should bring his paraphernalia.

TRADE ORGANIZATIONS.

The largest and most powerful trade organization in the Leased Territory is the Dairen Chamber of Commerce. The purpose of the organization is, like that of all chambers of commerce, to promote the trade of the district. It receives an annual subsidy from the Kwantung government to aid in paying expenses, and has rented rooms and a paid secretary. The membership is composed of the most influential Japanese business and professional men of Dairen. There are no foreign members.

The foreign merchants and bankers of Dairen are organized into a Foreign Board of Trade. The objects of this organization "are (1) to promote the general welfare of commerce, (2) to collect information on all points of interest to the mercantile commodity, (3) to represent, as the organ of the foreign mercantile community, its interests in every way, and to receive references and arbitrate upon matters connected with trade or manufactures at the request of those interested."

The Dairen Staple Products Exchange is an organization corresponding to produce exchanges in the United States. Staple products, such as beans, bean oil, bean cake, kaoliang, maize, hemp, seed, etc., are quoted, and only licensed brokers, by the payment of a monthly fee, are allowed to trade on the floor of the exchange. Both "spot" deals and "futures" are allowed. The daily prices set by this exchange are adopted as the standard for the whole of the Leased Territory and parts of South Manchuria. The members of the exchange are principally Japanese.

There is also a Chinese Guild in Dairen, composed of the principal Chinese merchants of the city. Its purposes and functions correspond to those of the Japanese Chamber of Commerce.

AMERICAN INTERESTS.

American interests have never been large in South Manchuria or the Liaotung Peninsula. In fact, were it not for two great events of recent years, namely, the Russo-Japanese War of 1904–05 and the pneumonic plague of 1911, this section of China would perhaps hardly be known to the average American. For some reason, American missionaries have never regarded the Liaotung Peninsula as a worth-while field for their endeavors. A large part of Manchuria has been closed to foreign trade until recent years, and, when it was opened, the Russians first and then the Japanese regarded it as their particular "sphere of influence," with the result that American general trade has not become firmly established there. When the South Manchuria Railway Co. was widening the gauge of its lines, between 1907 and 1914, and replacing the worn-out locomotives and cars with new rolling stock, a large part of the new equipment was purchased in America. The importation of these, combined with the trade in cotton goods and flour, gave the United States a goodly share of the trade of the Leased Territory, temporarily, but it has fallen off, proportionately, to a considerable extent in recent years.

There are, at present, only three missionary institutions in the Kwantung Leased Territory—a branch of the Young Men's Christian Association, a Danish mission, and the local Salvation Army Corps. Of the three, the Young Men's Christian Association probably exerts the most influence. There are two young Americans (the only American residents of the Territory, except the consul) who conduct the various educational and athletic classes. The association is housed in a large building, with a well-equipped gymnasium, bowling alleys, bathrooms, barber shop, four classrooms, reading room, parlor, library, two dining rooms, kitchen, and a dormitory of 24 bedrooms. The members of the association are principally Japanese, either students in the various schools and colleges or clerks in the mercantile houses.

The local Salvation Army Corps maintains a group of buildings in Dairen for rescue and relief work. They comprise a rescue home for women, a home for boy waifs, and a home for girl waifs and infants, and a fourth building containing a kitchen and bathrooms. The Salvation Army in Dairen is entirely managed by Japanese, and has been quite successful in its work.

The Danish mission is located in the Chinese section of Dairen. Its efforts are confined to religious work among the Chinese.

In addition to the three large institutions mentioned above, there are three small branches of the Japanese Presbyterian and Congregational Churches, two in Dairen and one in Port Arthur. These churches are presided over by Japanese pastors, occasionally assisted by traveling American missionaries.

The commercial interests of America in the Kwantung Leased Territory have chiefly to do with the importation of petroleum products, cotton cloth, flour, and machinery. There are at present in Dairen branches of three American firms, engaged, respectively, in the importation of petroleum products, tools and machinery, and sewing machines. In contrast to this there are eight British firms, engaged in general trade, and hundreds of Japanese firms. There are also several Japanese banks, a British bank, and a Russian bank, but no American bank. Several firms are agents for British steamship lines, but no American steamship lines are represented. From the above facts it can be seen that American business interests are, comparatively, not well represented in Dairen.

Of the total trade of the port with foreign countries, Japan has 72 per cent, Great Britain (including Hongkong) 7 per cent, Russia 4 per cent, and the United States 3 per cent. Inasmuch as the United States is in a position to supply cheaply and abundantly just the commodities that are needed, this 3 per cent seems rather small.

The most promising fields for American endeavor in the Leased Territory undoubtedly are those of general importing and exporting. Manchuria wants cotton cloth, flour, and machinery, and America is now buying large quantities of bean oil. These articles are now handled through Japanese or British jobbing firms and are carried on Japanese or British vessels. A reliable American house, corresponding to some of the old-established British general trading firms, might find in Dairen a promising field for growth.

TRADE SUGGESTIONS.

The varieties of cotton cloth most in demand in the Kwantung Leased Territory and South Manchuria are:

Plain gray sheetings, over 11 pounds per bolt of 40 yards.
Plain gray shirtings, over 11 pounds per bolt of 40 yards.
Plain white shirtings.
Drills, over 12¾ pounds per bolt of 40 yards.
Jeans, in 30 or 40 yard bolts.
Plain fast-black and colored italians.
Plain fast-black and colored venetians.
Figured poplins.
Japanese cotton cloth.
Imitation native cotton cloth (machine-made), gray or dyed, 18 inches by 20 yards.

White wheat flour of all grades is used, but the largest demand is for the cheaper grades. Flour is usually sold by the sack. The principal machinery imports consist of bean-mill machinery, railway equipment, spinning machines, and sewing and knitting machines. The largest items of iron and steel imports are nails, bars, pipes, sheets (plain and galvanized), and tin plate. There is a large import of gunny and cotton bags, used for packing beans, but these are usually imported from British India and Japan. There has been a steady market for building materials, such as structural steel, steel lath, and window glass, and a considerable amount has been imported from America, but Japanese window-glass manufacturers are now competing strongly and it will be necessary for American manufacturers to quote low prices in order to retain the trade.

Bean oil is now finding a considerable market in the United States, but it has been suggested that it would be more profitable for American cottonseed-oil and corn-oil manufacturers to import the raw beans and express the oil themselves during the seasons when their mills are usually idle. This would reduce their overhead expenses by keeping the mills in continual operation and would, moreover, keep the profit of milling in America. The residue (bean cake) is, moreover, a valuable fertilizer and cattle food and could be sold at a profit. At the present time the high freight rates across the Pacific prevent the shipment to America.

FOOCHOW CONSULAR DISTRICT.

By Consul Albert W. Pontius.

LOCATION AND AREA.

The Foochow consular district is located in Fukien, a Province on the coast of South China. It is situated in latitude 25° to 28° north and longitude 116° to 120° east. The location of this Province is similar to that of Florida in the United States.

The area of Fukien Province is 46,332 square miles, the Foochow consular district embracing about two-thirds of this area. In size, this district corresponds to South Carolina.

POPULATION.

The population of the district is roughly estimated at from 16,000,000 to 17,000,000. It is one of the most populous districts in China, averaging more than 500 inhabitants per square mile. Of the total population, it is estimated that not more than 7 per cent live in the cities. The one large city is Foochow, having a population of about 650,000. The total population of the district approaches that of the States of New York and Pennsylvania.

PHYSICAL FEATURES.

The district is a mountainous country, a series of chains running parallel to the sea. The summits of these chains generally exceed 3,000 feet, and in the north they even attain an elevation of 9,000 feet. The district has an extensive coast line, with numerous bays and fine harbors, and the well-cultivated soil produces good crops.

CLIMATE.

The climate is semitropical in the eastern part of the district, where the thermometer rarely falls below 32°. In the northwestern part, the climate is temperate and even very cold during winter. The annual rainfall during 1915 was 41.58 inches. The climate around Foochow itself is mild and delightful for about nine months of the year, but in the summer it is rather trying, the range of the thermometer then being from 74° to 98° F.

POLITICAL SUBDIVISIONS.

Foochow is the provincial seat of Fukien Province. The chief administrative officers are the civil and military heads, the governor and military general. All foreign intercourse is usually conducted with the local special commissioner of foreign affairs, the latter intermediary of communication having proved quite satisfactory during recent years. The country is divided into hsien or districts, each district presided over by a magistrate, and direct communication with the latter official is also had by the foreign consuls when desired.

EDUCATION.

During the past decade the attendance at the girls' schools in this district has increased 50 per cent and that at the boys' schools 20 per cent. Many of the teachers employed are returned students from foreign countries, and most of the girls' schools are conducted by missionary societies. The percentage of literature in Foochow itself is not more than 25 per cent, while in the interior the percentage falls as low as 10 per cent.

The student of a Chinese school pays an annual tuition ranging from $4 to $14, exclusive of the cost of books and boarding. The Government expends annually in this district the sum of $220,000 in its support of Government and private schools. The curriculum of these schools is prepared by the Ministry of Education and is based on the Japanese educational system. Inspectors are sent from time to time by the Government to the different schools in order to encourage the advancement of educational work.

Most of the students of the mission primary schools pay only 47 per cent of the cost of education, the remainder being provided by the mission concerned. In the case of girl students, the cost of education is borne almost entirely by mission funds.

The Chinese maintain in the Foochow consular district 2 normal schools, 2 law schools, 3 middle schools, 1 industrial school, 1 technical school, 1 commercial school, 1 sericulture school, 1 agricultural school, and 250 primary schools. The foreign missionary and educational institutions represented in this district are the Y. M. C. A., the American Methodist Episcopal Mission, the American Board Mission, the Church Missionary Society (British), and the Dominican Spanish Mission. The foreign institutions maintain 1 medical school, 1 theological college, 1 union college (for higher courses), 5 colleges, 16 hospitals, and 601 schools of all grades. The Fukien Union University, of Foochow, is about to erect a million-dollar group of buildings.

Hospital equipment and supplies are not used extensively in this district; neither is there a large demand for school supplies.

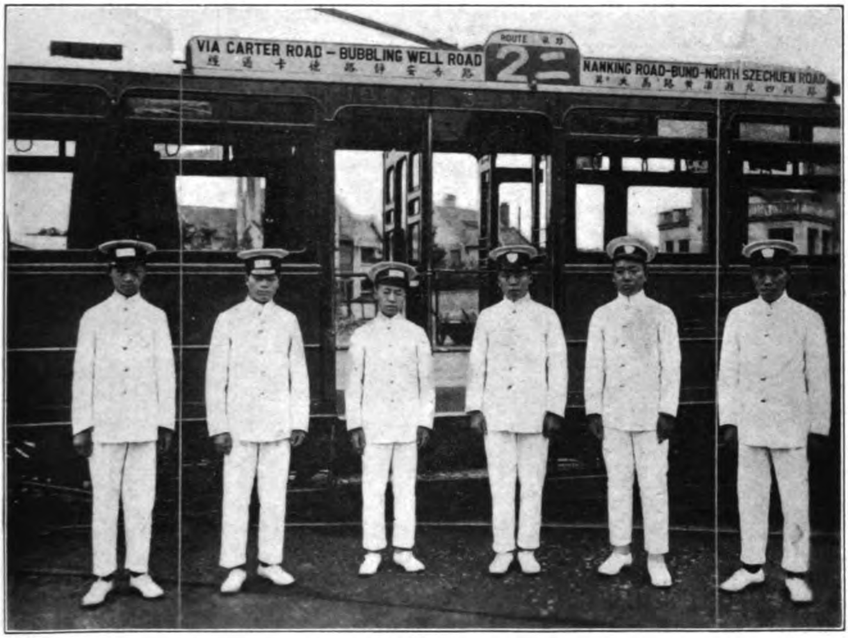
AGRICULTURE.

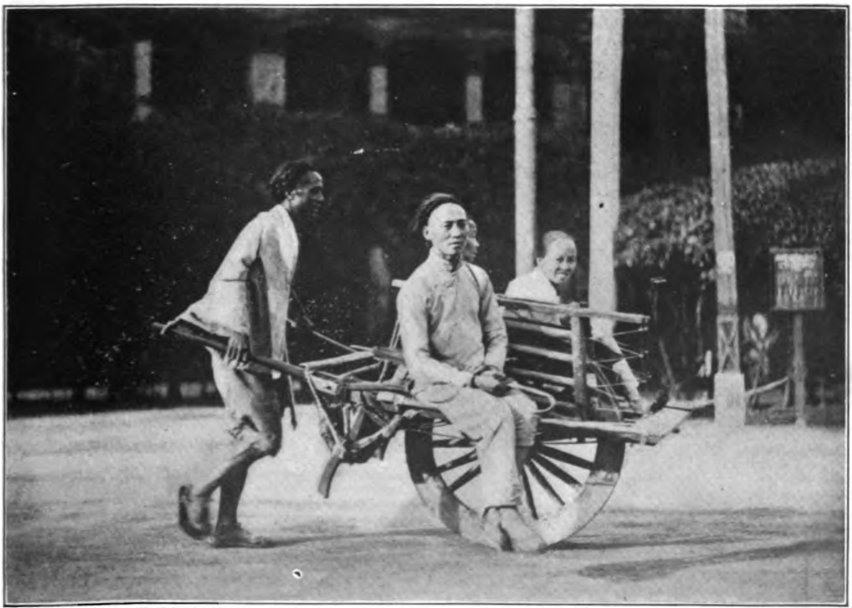
The principal crops grown are tea, rice, bamboo shoots, olives, oranges, plums, potatoes, sugar cane, mushrooms, and peanuts. With the exception of sugar cane and rice, all the foregoing products are included in the export trade.

There are two varieties of tea, black and green, and there are three crops to the year. The season for the first crop opens in May, and this product usually brings the best prices. The black variety is shipped chiefly to foreign countries, while the green is consigned almost entirely to the northern ports in China. During 1917 the total exports of tea amounted to more than 30,000,000 pounds.

There are two rice crops, designated as "summer" and "winter" crops. The summer crop is planted in April and the winter crop one month later. The estimated yield is about 2,986 pounds per acre.

There are two kinds of bamboo shoots, the early and late varieties. Shipments of this product in 1918 totaled 11,802,000 pounds.

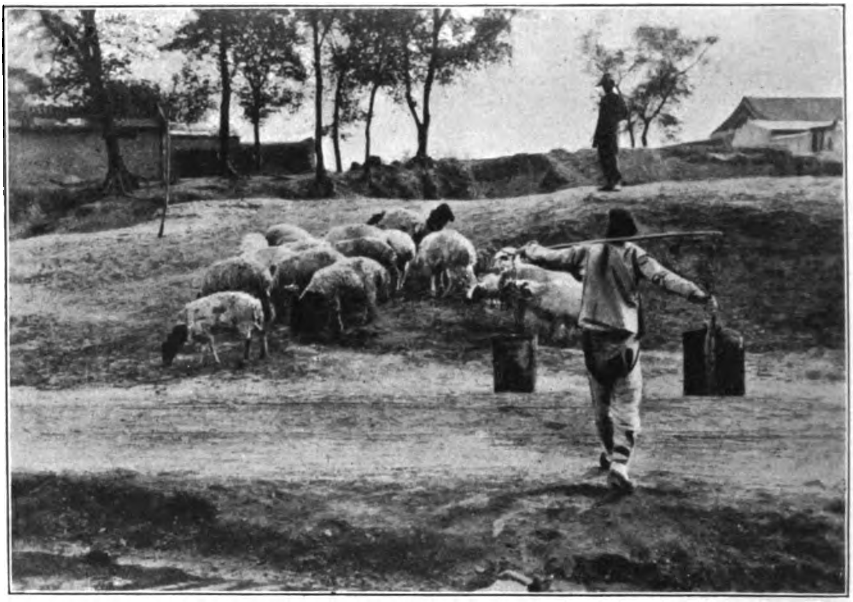

VIA CARTER ROAD – BUBBLING WELL ROAD
ROUTE
2
NANKING ROAD–BUND–NORTH SZECHUEN ROAD

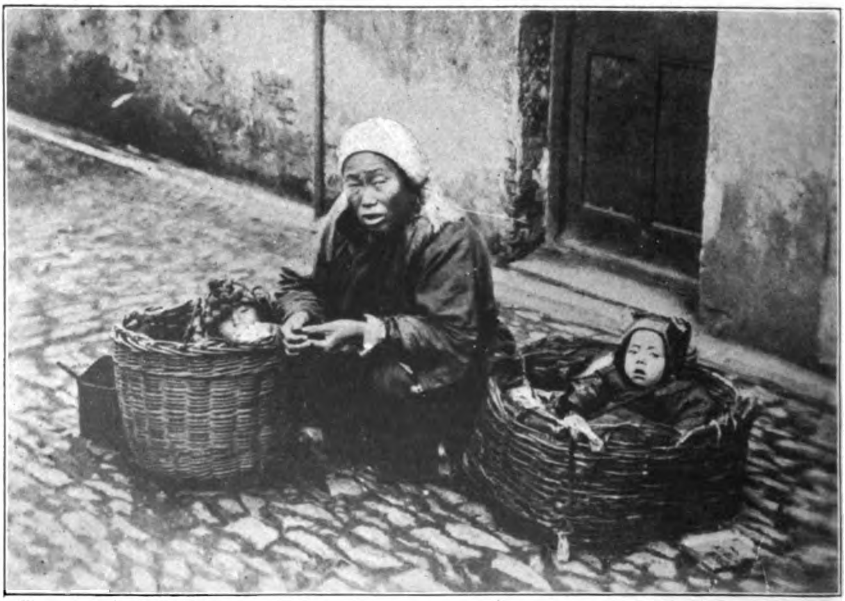


Photographs by E. M. Newman.

FIGS. 41 AND 42.—TWO MODES OF PASSENGER TRANSPORTATION IN CHINA.

Above: Tramway men, Shanghai.





Photographs by E. M. Newman.

FIGS. 43 AND 44.—CHINESE FARMER AND HIS FAMILY.

Three varieties of olives are grown in this district, the total exports during 1917 amounting to about 5,790,000 pounds and in 1918 to 3,663,000 pounds.

Oranges are gathered in the late fall. During 1918 shipments reached more than 8,000,000 pounds.

Potatoes are planted early in the summer, and the estimated yield is 11,944 pounds per acre.

Mushrooms are gathered in the late fall and early winter, the annual production reaching a large figure. Shipments of this product from Foochow during 1918 totaled more than 360,000 pounds.

Peanuts are planted in the spring, the yield being about 2,388 pounds per acre.

In this connection, attention should also be called to the growing of timber and bamboo at interior places. No figures in connection with the growing of the latter are obtainable, but shipments of the former during 1915 totaled in value $1,217,567.

Money is advanced by certain local firms to growers of crops, a monthly interest rate of 1.8 per cent being charged. Such local firms handle all incoming products and employ brokers to dispose of the goods upon arrival. A 2 per cent commission is charged by those firms, the brokers' charge being about 1 per cent. The local firms are held responsible for all accounts.

The agricultural implements used are of very simple native make, the water buffalo being the farm animal employed. Night soil, animal manure, and ammonia are most generally used as fertilizers. Besides water buffalos, live stock includes cows, pigs, goats, ducks, geese, and chickens.

MINERALS AND MINING.

In Fukien the mines that have been discovered and claimed include coal, iron, copper, gold, lead, zinc, and molybdenum, under native control and management. Shaowu, Yungan, Tehwa, Anki, Kienning (Chienning), Chungan, Lungyen, and Wuping are coal producing districts; the coal is high-grade anthracite. Anki, Kutien, Tehwa, and Tatien are iron-producing regions. Molybdenite is found in Yungtai; galenite in Ningteh, Yungan, and Tatien; copper in Nanping; and gold in Shaowu and Kienning. The mines in operation are molybdenite, lead, coal, and copper mines—molybdenum from mines of the Yungpao Molybdenum Mining Co. in Yungtai; lead from the holding of the Huhsing Lead Mining Co. in Ningteh; and coal from the mines of the Ichi Coal Mining Co. in Shaowu. The copper at Nanping and gold placer at Kienning, discovered by a Chinese mining engineer born in America and graduated at Columbia University, have good indications of a great future. Prospecting work has been undertaken on the copper mine.

The mines in operation do not use mining machinery, though foreign mining methods have been adopted. There are good chances, therefore, for enterprising mining-machinery companies, as the mining people now realize the importance of machinery for quicker work and greater profit.

Mining licenses must first be obtained through the local mining bureau before any prospecting or development work can be started. Laws enacted by the Board of Agriculture and Commerce control mining companies.

Most of the mines are still in the prospecting stage, and no reliable figures of mining products can be given. It is said that only a small quantity of molybdenite has been exported. But capital and much perseverance and skill will be needed before these mines produce any noteworthy results.

COMMUNICATIONS BY SEA AND LAND.

The sole means of communication between the Foochow district and the near-by trade centers of Shanghai and Hongkong is by sea. With the exception of a few boats during the tea season, no direct communication with Europe or the United States is had. Steamers carrying cargo to and from Foochow are now compelled to anchor at Pagoda Anchorage, a safe harborage lying about nine miles below Foochow in the Min River. The port of Santuao, which is also open to foreign trade, is of no commercial interest to the American manufacturer, that port serving chiefly as a base for the shipment of tea to Foochow; it is situated some 70 miles north of Foochow, the harbor being one of the finest on the China coast.

Referring to the sea approach to Foochow, at low water, the depth on the bar is 12 feet, and large ships can not enter the river but are compelled to await the rise of the tide, when the depth of the water reaches 25 to 30 feet. Steamers have again to stop, and this time finally, at Pagoda Anchorage, which is 35 miles distant from the mouth of the river. All cargo is transshipped on lighters at the anchorage, and from two to three days' delay usually ensues before the arrival of the goods at Foochow. An additional fee of 20 cents Mex. for each package is levied for carriage on these lighters or cargo boats.

About 10 small steamers (of 8-foot draft) ply between Foochow itself and Santuao, Hsinghua, and other near-by coast ports. These steamers all operate under the Chinese flag. Several small launches operate under foreign flags to up-river points under the Customs inland steam navigation rules. The latter cater only to the passenger trade.

There are no railways or tramways in operation in this district. During the latter part of 1915 leading local officials and merchants planned the construction of a light railway from Foochow City to Pagoda Anchorage, a distance of nine miles, at an estimated cost of about $200,000. The project is still held in abeyance because of lack of funds.

There are practically no roads, strictly speaking, in the rural portions of this district. In Foochow itself several miles of roads have been built by the foreign community. About 30 miles of macadam road just outside the walled city have also been built by the Chinese.

In addition to the boat service in general use throughout this district, there are only two land routes that deserve to be mentioned; both of these are merely 4-foot stone paths, leading to and from neighboring Provinces. The hilly nature of the country makes the use of vehicles of any kind impossible.

POSTAL FACILITIES.

The postal facilities between this district and the outside world are adequate. In addition to the Chinese postal service, British, French, and Japanese post offices are located in Foochow. Parcels can be sent to the United States through any one of the five offices. Parcels from the United States are invariably received through either the British or Japanese post offices. Money orders to points in the United States can be dispatched through any one of the foreign post offices. Letters from New York to Foochow usually take about one month in transit.

TELEGRAPHS.

There are two telegraph offices in Foochow—those of the Chinese Government and the British Eastern Extension Service. The latter has cable connections with all points throughout the world. The Chinese company purchases all of its foreign-manufactured material in England, Germany, and Denmark, and the British concern patronizes its home manufacturers exclusively. Cable communication with the United States can be had via the Atlantic or Pacific routes, the former route being the more expensive. The Chinese company uses 1 Wheatstone and 12 Morse machines and the British company 3 Morse and 5 recording machines. There are no prospects of any further extension of either service in the near future.

TELEPHONES.

There is only one telephone service in this district—that at Foochow. The local telephone company is privately owned, had 560 subscribers at the beginning of 1918, and does an annual business of more than $10,000. The subscription for the ordinary wall instrument is $60 Mex.[1] per annum, and for the mitrophone style $72 Mex. per annum. The company proposes to install all mitrophone instruments in the near future. There are two branch exchanges, six switchboards being in use—four of British and two of Norwegian manufacture. There are 20 native operators, no foreigners being employed in any department. Practically all of the supplies purchased are of either Japanese or European manufacture.

NEWSPAPERS.

The only newspapers published in this district are two printed in the Chinese text. One, the Min Sheng Pao, with a daily circulation of 7,000, is controlled by Chinese, while the other, the Min Pao, with a daily circulation of 1,000, is owned and operated by Japanese. It is estimated that not more than 25 per cent of the natives are able to read the newspapers. The advertising rates charged are as follows:

(1) For every line of 10 characters, No. 2 type, or fraction thereof, 5½ cents Mex. per issue.

(2) For every line of 16 characters, No. 4 type, or fraction thereof, 3½ cents Mex. per issue.

(3) For every line of 20 characters, No. 5 type, or fraction thereof, 3 cents Mex. per issue.

(4) Double charge for front page, and intermediate space.

(5) A 10 per cent discount will be allowed on insertions for one month, 20 per cent for two months, 30 per cent for seven months, 40 per cent for six months, and 50 per cent for one year.

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[1] See footnote on p. 84.

PUBLIC WORKS AND SANITATION.

In 1918 the Min River Conservancy Board was formed by members of the Chinese and foreign communities, and a preliminary scheme was drawn up with a view to improving the river to a depth of 10 feet at low water between Foochow and Pagoda Anchorage. The project, which will cost about $900,000 Mex. and will require three years to complete, has received the sanction of the Peking Government and the diplomatic corps at Peking. An American engineer has been engaged for the work, which is expected to begin in the summer of 1919. Funds for the work are now being collected by means of a surtax of 5 per cent on the import and export duties and tonnage dues levied by the Maritime Customs, which is helping to finance the project.

No special irrigation or reclamation projects have been promoted or effected in recent years in this district. Work of that character on a small scale is always carried on by the Chinese population, whole communities at times uniting to common advantage.

The local officials in 1914 instituted a Road Improvement Bureau, and this body has been active in effecting many improvements throughout Foochow. Streets have been enlarged, electric lighting installed, and a new macadam road, with concrete drains and bridges, has been constructed. The construction of additional macadam roads is going on slowly.

There is only one lighting plant in this district, the one erected at Foochow by the Foochow Electric Light Co., which also operates the local telephone exchange. This company has been given exclusive rights for the whole of Fukien Province, and plans to operate lighting plants in the cities of Hsinghua, Kienning, and Yenping in the not distant future. At the beginning of 1919 the number of lights installed was about 47,500. There are two engine sets installed, each of 150 kilowatts, the two dynamos being capable of supplying current for 30,000 lights. There is also installed one American turbine of 500 kilowatts capable of supplying current for 40,000 lights. The company intends to replace the two engine sets with another turbine of 1,000 kilowatts. The pump and boilers as well as the dynamos are of British manufacture. Most of the electrical supplies have been purchased in England; American and Japanese equipment is also used. The net profits of the company in 1918 amounted to about $100,000 Mex.

There were 592 subscribers to the telephone service at the beginning of 1919.

TREATY PORTS.

Although there are two treaty ports in this district, Foochow and Santuao, one need only refer, so far as trade conditions are concerned, to the first-named port, since practically all of the important export trade is under the control of merchants located there. The population of Foochow and suburbs is estimated at 800,000. It is the provincial seat of government. There are no foreign concessions in Foochow, and unrestricted residence within the business confines of the port is enjoyed by all foreign merchants. The United States, Great Britain, France, Germany, Japan, the Netherlands, Norway, and Mexico are countries having consular representation in the port.

TRADE SUGGESTIONS—FINANCE AND BANKING.

Foochow has adequate banking facilities. There are three foreign banks, the Hongkong & Shanghai Banking Corporation, British; the Banque Industrielle de Chine, Franco-Chinese; and the Bank of Taiwan, Japanese. With the exception of kerosene, practically all of the American-manufactured articles consumed locally are imported through native firms. That a good market along many lines exists for the American manufacturer seems certain, but it will be difficult to enter into local competition unless active measures are taken, by having representatives on the spot. The time has apparently come when American firms must establish themselves at convenient trade centers in China, in order to secure their due share in the trade. The half dozen British firms located in Foochow make most of their profits in the export trade; yet, being on the ground, they are a constant aid to the British manufacturer.

There is no reason why an American firm should not locate in Foochow and conduct a general export and import trade with profitable results. Every pound of tea shipped to the United States during a recent year was consigned through local British firms. An American firm located at Foochow could also profitably ship to the United States camphor, hemp, cordage, feathers, lacquer ware, and possibly olives and tobacco. A glance at the import statistics will show that there are numerous articles in which the American manufacturer could, under existing conditions, successfully compete in the local market.

It would be preferable, for various reasons, for such an established American firm to operate and conduct all of its trade through headquarters established in Shanghai. Foochow is too far north and too near Shanghai to be, as at present, dependent upon the port of Hongkong for the conduct of its import and export trade. Shipping conditions between this port and Shanghai are much better, two steamship lines plying between the ports; and the establishment of a local American firm would soon tend to bring the routing of all Pacific-coast goods to this port via Shanghai, in place of the present method of subjecting all such goods to the delay of shipment by the longer route to Hongkong and thence back again by coast steamer. Transshipment of Foochow-bound Pacific-coast cargoes at Shanghai would mean a saving of 7 to 14 days, and if necessary all bills, documents, etc., could be sent through an American bank at that trade center. In fact, there is no reason why the American firm could not act as local agent for such a bank. American fire and marine insurance, as well as steamship, companies could also be properly represented to mutual advantage.

The currency in circulation in the Foochow district is of three classes—"chopped" dollars, native bank notes, and small or subsidiary coin. The chopped dollar is a defaced silver dollar coin that is usually quoted at a 2 to 4 per cent discount in comparison with the clean unmarked Shanghai Mexican dollar; $100 in chopped dollars is equal to $105.80 in native bank notes or $110 in small or subsidiary coin. In business transactions between Chinese the bank note is exclusively used, while in dealings with foreign merchants the chopped dollar alone is used. Practically the whole of the importation of foreign manufactured goods is arranged with Hongkong and Shanghai firms, few or no direct orders being placed. The local foreign banks charge the usual rates of interest prevailing at other treaty ports. The Chinese banks handling secured loans in amounts from $500 to $5,000 levy an interest charge of 1½ per cent monthly. No interest is paid on current accounts. In extending the usual three months' credit on unsecured loans of larger amounts to responsible parties, a monthly interest charge of from $5 to $15 per $1,000 is collected.

As stated, there are a British bank, a Franco-Chinese bank, and a Japanese bank in Foochow. Exchange on European and American points is bought and sold freely. Rates on all Asiatic ports are also quoted. Established and responsible foreign firms in this port ordinarily have no difficulty in receiving financial assistance from the foreign banks in the conduct of their export and import trade.

At the beginning of 1918 the 37 Chinese banks in Foochow had a combined capital of $800,000 and notes outstanding totaling $950,000. The net profits of these banks during 1917 amounted to about $200,000. The Chinese banks are the medium for financing the planting and movement of all interior crops, and for keeping the timber trade on a sound footing. They also facilitate the trade to and from Chinese ports, but do not quote exchange on foreign countries.

MANUFACTURING AND OTHER INDUSTRIES.

The principal Chinese industries that have been developed and built up during the past 10 or 12 years include the manufacture of native cotton cloth, soaps, canned goods, condensed milk, glassware, and towels. The manufacture of a cheap laundry soap is now an established industry of Foochow, the production of the seven factories during 1917 amounting to about 21,000 boxes, valued at $46,000. Several local factories are engaged in the manufacture of condensed milk, using buffalo milk; the output in 1917 reached about 150,000 tins, the product being consumed entirely in Foochow and interior districts. A Chinese sugar mill with foreign machinery has also been established. A government arsenal at Pagoda Anchorage below Foochow, established some years ago and equipped with fairly modern machinery, is now doing excellent engineering and ship-repair work. A new modern brick factory, with a capital of $70,000, was established during 1917. Second-hand machinery was installed, costing 20,000 yen and purchased in Japan. The factory was, however, obliged to shut down during 1918. A fair business is done in the manufacture of brick tea at one factory, foreign machinery being used.

The principal crude native industries are the manufacture of umbrellas (kittysols), horn combs, and crude paper.

The only foreign industries located in Foochow are sawmills, an albumen factory, and a small ice plant. The two oil companies maintain installations where oil cans are assembled and completed for the distribution of kerosene oil. Little opportunity appears to exist at present for the extension of manufactures along any line.

Much salt is produced in the Foochow district. For many years this industry was a Government monopoly, but in August, 1918, the free-trade system was instituted in about 30 districts and will be gradually extended throughout the whole Province. This system is popular with the people, as the price of salt has been reduced 50 per cent in the districts in which it operates, and it will eventually produce more net revenue than the old monopoly system. The revenue received by the Government during 1918 was about $1,100,000, Mex.

Two new sawmills were established at Foochow during 1918, making four now in operation at that port. The new ones are a British mill and a Sino-Japanese plant. Planks and boxes were turned out in large quantities during the year. Immense rafts of logs and poles are sent down the Min River to Foochow, where the logs are cut up and the poles prepared for export.

There was recently formed in Foochow an association for the promotion of Chinese industrial interests. Several members of this organization have already raised $75,000 for the establishment of an iron foundry at Foochow. It is planned to produce small iron household, agricultural and other utensils, machine parts, and other iron products of a simple nature.

COMMERCE OF THE PORT—INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Foochow during the years 1904, 1913, and 1918:

Imports and exports.	1904	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$4,982,645	$5,569,728	$4,932,332
From Chinese ports	713,312	958,748	1,662,656
Total foreign imports	5,695,957	6,528,476	6,594,988
Reexports of foreign goods:			
To foreign countries and Hongkong	45,654	43,460	40,796
To Chinese ports	32,754	181,184	217,466
Total foreign reexports	78,408	224,644	258,262
Net total foreign imports	5,617,549	6,303,832	6,336,726
Imports of Chinese products	3,053,730	6,785,869	7,193,223
Reexports of Chinese products:			
To foreign countries and Hongkong	1,309,677	1,701,698	890,242
To Chinese ports	729,284	1,658,589	2,792,910
Total Chinese reexports	2,038,961	3,360,287	3,683,152
Net total Chinese imports	1,014,769	3,425,582	3,510,071
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	2,171,351	2,732,522	3,302,557
To Chinese ports	2,591,870	4,246,680	5,511,814
Total exports of local origin	4,763,221	6,979,202	8,814,371
Gross value of the trade of the port	13,512,908	20,293,547	22,602,582
Net value of the trade of the port	11,395,539	16,708,616	18,661,168

EXPORT TRADE.

Shipments of local native produce to Europe and the United States are confined almost entirely to tea, and only small quantities of camphor, egg albumen, feathers, and lacquer ware have been shipped to those countries. Shipments of large quantities of the following products are annually made to Chinese and other Asiatic ports: Bamboo shoots, lampblack, mushrooms, medicines, olives, oranges, paper, potatoes, tea, timber, and umbrellas. The lack of an American firm and bank will always act as a handicap in the increased development of export trade with the United States. The several British firms engaged in the shipment of tea to the United States look upon this trade as merely a side line, their efforts being principally expended in the furthering of trade with British markets. Practically all of the export cargo to the United States is shipped to Hongkong for transshipment to destination. Storage facilities in Foochow are adequate for present needs.

The following table shows the principal exports (excluding re-exports) through the Maritime Customs at Foochow during the years 1904, 1913, and 1918:

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
Bamboo and bamboo ware ....value..	$9,917	$11,888	....	$73,009
Bamboo shoots ....pounds..	12,463,333	12,526.000	11,802,000	926,112
Camphor ....do....	161,333	27,600	56,533	33,536
Chinaware, earthenware, and pottery..........pounds..	....	269,733	535,866	9,649
Feathers, duck, fowl, etc ....do....	304,267	295,066	116,000	9,916
Fish and fishery products ....do....	200,667	124,966	439,332	87,829
Furniture ....value..	$5,218	$13,760	....	64,519
Hemp ....pounds..	62,533	....	(a)	(a)
Horns and hides, cow and buffalo ....do....	11,867	11,266	b 186,400	b 28,653
Lacquer ware ....do....	29,733	1,600	(a)	(a)
Lampblack and soot ....do....	345,067	873,467	(a)	(a)
Leather ....do....	85,033	1,066	77,866	42,430
Lungngans (fruit), dried ....do....	556,667	488,400	248,266	29,610
Medicines ....value..	$25,591	$49,775	....	76,795
Mushrooms ....pounds..	48,800	387,000	361,733	216,917
Oil:				
Camphor ....do....	83,333	....	791,999	82,411
Tea, wood, bean, etc ....do....	167,333	18,333		
Olives:				
Fresh ....do....	3,064,800	4,980,400	3,662,933	98,706
Salted ....do....	182,000	....		
Oranges, fresh ....do....	4,015,200	13,750,400	8,058,933	102,028
Paper, first quality ....value..	$138,512	$29,812	....	653,077
Plums, dried and salted ....pounds..	513,333	657,800	(a)	(a)
Potatoes ....do....	1,630,533	2,668,533	1,911,733	12,741
Seedcakes ....do....	221,067	5,869,600	2,086,533	13,718
Tea:				
Black ....do....	34,185,200	16,828,133	6,208,800	1,656,805
Green ....do....	640.667	647,600	4,784,400	959,409
Brick, black ....do....	3,211,867	1,835,333	1,197,066	122,102
Dust ....do....	495,733	24,800	454,400	34,537
Timber and wood of all kinds ....value....	$360,566	$800,275	....	2,193,289
Umbrellas, paper ....number..	388,783	759,256	506,848	108,841

a Figures comparable to those for the other years shown are not available for 1918. b Skins.

The following table shows the value of the articles declared at the Foochow consulate for exportation to the United States during the calendar years 1917 and 1918:

Articles.	1917	1918
Curios..................	$5,204	$1,191
Drawn work..................	....	217
Household goods..................	1,177	....
Quills, cut..................	3,986	10,133
Tea..................	343,110	179,121
Tobacco leaf..................	....	252
Total..................	353,477	190,914

During 1913, the last normal year before the war, the declared exports from Foochow to the United States were valued at $220,412, of which tea accounted for $218,478.

IMPORT TRADE.

In cotton goods the British and Japanese manufacturers have had a good trade in recent years in the Foochow district, while but little American cloth has been sold. That this condition will not improve in the near future is a foregone conclusion, and it is only through persistent endeavor that any improvement in the trade can be looked for. As already indicated, the import trade in cotton piece goods is almost entirely in the hands of the native merchants who purchase their wares in Shanghai and Hongkong. This being the case, the comprador medium of the foreign firms enters but little into the situation. Shipping facilities between Foochow and Hongkong and Shanghai are adequate, semiweekly trips being made as a rule. Most of the interior points in this district can be reached by water transportation, and goods properly packed for export usually reach their destination in good condition.

The following table shows the principal net imports of foreign goods through the Maritime Customs at Foochow during the years 1904, 1913, and 1918:

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
COTTON GOODS.				
Shirtings, plain, gray and white ..... pieces..	79,266	54,269	55,063	$320,000
Drills:				
American ..... do....	4,454	2,290	235	1,663
English ..... do....	4,125	15,461	3,288	22,749
Jeans, English ..... do....	.....	.....	4,811	32,749
T cloths:				
English ..... do....	113,049	74,252	51,913	146,820
Japanese ..... do....	.....			
Cambrics, lawns, and muslins, dyed, white, and printed, pieces	12,581	26,786	7,529	30,820
Chintzes and plain cotton prints ..... pieces..	9,074	13,351	10,521	52,516
Lenos and balzarines, white, dyed, and printed ... do....	504	.....	1,356	5,443
Turkey-red cotton and dyed T cloths ..... do....	10,422	14,050	6,237	23,067
Cotton, Italian, plain, colored, and figured ..... do....	20,552	17,534	(a)	(a)
Cotton lastings, figured ..... do....	.....	.....	(a)	(a)
Shirtings, dyed and plain:	11,199	5,659	6,896	35,622
Hongkong ..... do....	3,488		1,190	9,832
Other ..... do....	290,800	157,295	(a)	(a)
Cotton cuts, dyed ..... yards..				
Cotton flannel, plain, dyed, and figured ..... pieces..	6,191	7,106	9,806	47,448
Japanese cotton cloth ..... yards..	.....	.....	7,365	614
Japanese cotton crape ..... do....	.....	.....	(a)	(a)
Velvets and velveteens, plain ..... do....	73,861	53,888	11,326	5,946
Cotton blankets ..... pieces..	1,287	.....	1,732	2,541
Towels ..... dozen..	13,764	26,330	27,298	28,125
Handkerchiefs ..... do....	11,674	18,309	11,541	6,853
Cotton goods, unclassed ..... yards..	141,863	.....	(a)	(a)
Cotton yarn ..... pounds..	5,300,133	4,662,667	1,094,000	429,692
METALS.				
Lead, in pigs and bars ..... do....	1,823,467	1,480,533	612,266	70,833
Tin in slabs ..... do....	487,600	583,867	283,733	255,292
Tin plates ..... do....	837,467	.....	242,400	51,099
SUNDRIES.				
Bêche de mer ..... pounds..	64,533	351,467	419,866	103,755
Buttons, brass ..... gross..	5,037	.....	14,311	7,664
Candles ..... pounds..	57,733	196,667	248,666	31,149
Clocks and watches ..... number..	5,719	b $9,226	5,519	13,846
Clothing, hats, boots, etc ..... value..	$7,982	.....	.....	56,418
Coal ..... tons..	8,388	3,779	7,778	139,837
Cotton socks ..... dozen..	5,010	(a)	(a)	(a)

a Figures comparable to those for the other years shown are not available for this year.
b Value.

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
SUNDRIES—continued.				
Cuttlefish ....pounds..	582,133	637,867	(a)	(a)
Dyes, aniline............value..	$28,926	$27,210	....	$10,628
Indigo, artificial............pounds..	....	....	(a)	(a)
Fish and fishery products............do....	1,704,133	b 6,214,533	5,778,133	470,983
Flour ....do....	2,848,667	15,578,400	134,800	5,835
Ginseng............do....	41,259	31,171	....	95,308
Glass, window ....boxes..	3,664	5,263	2,135	21,443
Glass and glassware ....value...	$5,364	....	....	10,305
Graphophones and accessories............do....	$1,123	....	(a)	(a)
Lamps and lamp ware ....do....	$17,819	....	....	7,904
Leather ....pounds..	55,333	....	266,666	121,686
Machinery and parts ....value..	$29,198	$45,523	....	76,320
Matches ....gross..	206,762	315,008	310,303	167,920
Milk, condensed, in tins ....dozen..	1,003	....	4,389	12,490
Munitions of war............value..	$165,109	....	....	155,233
Mushrooms ....pounds..	3,067	....	(a)	(a)
Mussels, dried............do....	264,533	260,133	(a)	(a)
Needles ....thousands..	52,355	....	14,732	14,061
Oil, kerosene:				
American............gallons..	197,010	1,684,049	766,832	249,026
Borneo............do....	....	971,213	460,982	118,492
Russian............do....	400,000	....	....	....
Japanese ....do....	....	70	178,785	42,656
Sumatra ....do....	3,909,479	584,495	620,147	189,663
Paper, all kinds ....value..	$10,674	....	....	46,006
Sandalwood............pounds..	550,267	438,133	299,200	39,674
Seaweed and agar-agar ....do....	2,845,600	2,282,267	2,649,866	57,314
Soaps, bar ....value..	$10,285	....	(a)	(a)
Soda ....pounds..	116,400	....	282,266	20,286
Sulphur............do....	....	....	(a)	(a)
Sugar, all kinds ....do....	12,951,200	16,479,200	14,779,599	837,581
Umbrellas, cotton ....number..	19,739	84,219	39,878	28,248
Varnish ....pounds..	74,133	....	28,800	5,982
Wines ....value..	$8,826	....	....	4,560
Wax, paraffin ....pounds..	49,333	....	241,200	27,431

a Figures comparable to those for the other years shown are not available for this year.
b Fish, dried and salt.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

Except for an occasional tea steamer, there are no direct shipping facilities between Foochow and the United States. Export cargo consigned from and shipped to this port must be transshipped at either Hongkong or Shanghai. Cargo may thus be shipped to and from American points via Pacific or Suez routes. The three shipping companies maintaining regular services with Foochow are the Douglas Steamship Co. (British), touching at Foochow, Amoy, Swatow, and Hongkong; the China Merchants Steam Navigation Co. (Chinese), whose steamers run between Foochow and Shanghai; and the Osaka Shosen Kaisha, whose steamers touch at Foochow, Shanghai, Tientsin, Dairen, Amoy, Takow, and Keelung (the last two ports being in Formosa).

The high freight rates prevailing as a result of the war have restricted the export and import trade to no small extent. Despite the high rates, space on steamers is often difficult to arrange for. Export shipments to the United States can be arranged through local agents of the American, British, and Japanese shipping companies. Steamers obtain pilots at the island of Matsu, outside the mouth of the Min River. Pilotage and harbor dues in force at Foochow are the same as those at other treaty ports in China.

FACILITIES FOR TRAVEL.

There are two hotels in Foochow, the rates for board and room ranging from $5 to $10 local currency, per day. The best seasons for visiting the district are in the spring and fall. All traveling in the interior must be done by either chair or houseboat. Small steam launches meet incoming and outgoing steamers at Pagoda Anchorage, 9 miles distant from Foochow, passengers being offered such means of travel to and from the port.

TRADE ORGANIZATIONS IN DISTRICT.

The Foochow branch of the American Association of China was recently formed. The new organization will take the place of an American chamber of commerce, the number of local Americans being too few to support a chamber.

Another foreign trade organization in the port is the British Chamber of Commerce. In addition there is a Chinese Chamber of Commerce. Twenty native guilds are also established in the port. None of the Chinese organizations are in a position to carry on English correspondence.

AMERICAN INTERESTS.

The first American firm to locate in Foochow was established in the sixties, and in 1875 there were three American firms engaged in the import and export trade. None of these firms are at present in existence, and there is no American firm now in the port capable of handling an import or export trade.

American missionaries appeared in the district simultaneously with the first of the American merchants. The extent of American missionary interests is on a par with, and may even surpass, similar large interests of Great Britain. Catholic mission interests are represented by Spanish priests. The American societies represented in educational or missionary work are the American Board Mission, the Methodist Episcopal Mission, and the Y. M. C. A. The American societies are engaged in work in Foochow and 14 other places, 125 Americans being employed in the promotion of the work. Well-equipped hospitals are maintained in Foochow and seven other places.

Apart from the sale of kerosene oil and sewing machines, American interests are not represented locally. In contrast with this condition, there are located in the port 2 British banks, 13 British import and export merchants, 1 Japanese bank, and 2 Japanese import and export firms.

HARBIN CONSULAR DISTRICT.

By Consul C. K. Moser.

LOCATION AND CLIMATE.

North Manchuria may be considered as coincident with the Harbin consular district. As distinguished from South Manchuria, it consists of all Manchuria lying north of the city of Changchun and dominated by the Chinese Eastern Railway, a Russian institution. It is thus, for commercial purposes, "within the sphere" of Russian influence. South Manchuria, comprising Fengtien (Mukden) Province and the lower portion of Kirin, is dominated by the South Manchuria Railway and is within the sphere of Japanese influence. The two railways connect at Changchun, thus linking the Far East with Europe by land route.

The Harbin consular district includes the Province of Heilungkiang and all that part of Kirin Province lying north of a line drawn between the cities of Changchun and Kirin (which are included in the Mukden consular district) and thence eastward to the Manchurian-Russian frontier. It includes the following Chinese cities opened to foreign trade: Manchouli (Station Manchuria,) Hailar, Tsitsihar, Aigun (Taheiho or Sakhalin), Sansing, and the city of Harbin. Besides these, all the towns along the Chinese Eastern Railway and the Mongolian town of Bodune, on the Süngari River, are open to trade.

The district extends from 43° 50′ north latitude, at Changchun, to 53° 30′ at Argun, on the Amur River, and from 117° 50′ to 135° 20′ east longitude. It lies, therefore, in about the same latitude as Minnesota, the Dakotas, Montana, and the southern half of the three Canadian Provinces of Manitoba, Saskatchewan, and Alberta. The climate is very similar to that of Montana, with long, dry, exceedingly severe winters and short, hot, and rather showery summers. Ice closes the rivers to navigation from the beginning of November to the end of April. The coldest regions are along the upper course of the Amur in the Greater Khingan Mountains, where the winter temperature sometimes falls to 70° F. below zero and the ice on the rivers is 6 feet thick. At Harbin in ordinary winters the thermometer rarely falls lower than 40° F. below zero, but in an ordinary year from the first of December to the end of March the maximum daily temperature averages about 30° F. In summer the thermometer at Harbin seldom reaches 100°, and as the atmosphere is very dry the heat is not oppressive.

AREA AND POPULATION.

The area of Heilungkiang Province is 166,700 square miles and the population approximately 2,000,000. Kirin Province has an area of a little more than 100,000 square miles and a population of a little less than 6,000,000. Thus the Harbin district is nearly as large as the combined area of North and South Dakota, Minnesota, and Iowa, and its population is about equal to that of the State of Pennsylvania.

The original inhabitants, the Manchus, were of Tungusic origin and are rarely seen, but settlements are still found along the Sungari, especially in the region of its junction with the Amur, and on the Ussuri River. The great body of the people are Chinese who have immigrated from Shantung or the southern Provinces. The Russian and foreign population is confined almost exclusively to Harbin and the towns along the Chinese Eastern Railway. Living conditions make it practically impossible for foreigners, except officials and the agents of great commercial firms, to reside in the interior towns. There is never likely to be such a thing as a white colonization of the timber, mining, or agricultural districts.

Chinese farmers form the bulk of the population. These people are almost wholly sufficient unto themselves. While war conditions have created a great demand and high prices for their products and they have enjoyed prosperity previously undreamed of, they are very backward in developing the requirements of a higher civilization, and their buying capacity, as well as their taste for foreign products, is still limited. Probably $5,000,000 would be a large estimate of their annual buying capacity. The development of Manchuria itself as a market for foreign products can only come with the development of its mines, forests, and immense agricultural areas by foreign capital and enterprise. The population in the west, south of the Khingan Mountains, is largely nomadic and the people are satisfied to subsist almost wholly upon their herds and flocks.

The Russian population, aside from the commercial portion at Harbin, is supported almost wholly by its activities in connection with the Chinese Eastern Railway. The non-Russian foreign population is engaged exclusively in trade. It will grow only as the opportunity for trade between the eastern portions of Russian territory and the Pacific develops, or as the mining, agricultural, and timber resources of Manchuria are opened up to the world.

PRINCIPAL CITIES AND TOWNS.

HARBIN.

The modern town of Harbin is the product of the Russo-Japanese War and is 15 years old. It consists of four sections—Old Harbin, the original town erected by the Russians at the junction of the Southern Branch of the Chinese Eastern Railway (Harbin-Changchun) with the main line; Novogorod, or New Town, containing the present railway station, administration offices, hotels, consulates, and principal residences; the Priestan, or Harbor, situated between the hill on which New Town stands and the Sungari River, and containing the flour and bean mills, the banks, the principal wholesale and retail houses; and Madiagow, containing the residences of railway employees, artisans, and laborers. Old Harbin is of no importance. New Town is the center of the administrative and social life, while the Priestan is the scene of most commercial enterprises. These different sections are all combined under the name of Harbin, and the population at the beginning of the war was 65,000. It has nearly doubled since that time; hence the present population is not less than 126,000. It is estimated that about 90,000 are Russians, 3,000 Japanese, and 2,000 foreigners of other nationalities, the largest number of whom are Greeks. The rest are Chinese. The American community in

North Manchuria numbers about 100, the British slightly more. There are no Germans or Austrians, and very few French or persons of other nationalities.

Harbin is the seat of administration of the Chinese Eastern Railway and of its workshops. The Chinese Maritime and River Customs are both located there. There are five banks, each doing a foreign-exchange business. The 10 principal flouring mills of Manchuria, four bean-oil mills, and two candle factories constitute the principal industries. There are also two cold-storage plants, a municipal slaughterhouse, and a large meat-packing plant (British), which exports meat products to Europe. Across the Sungari is the Hulan Sugar Factory, owned by Chinese capital, for the manufacture of sugar from beets. A Russian factory located at Station Ashiho, 20 miles east of Harbin, has ordinarily a larger output; but, as a result of war conditions, neither of these factories are important producers at present.

Formerly Harbin was regarded as a distributing center principally for North Manchuria and for the river towns along the Amur in Siberia. But since the war it has become the great Eastern point of distribution for trade to all parts of Russian territory. Merchants from Petrograd, Moscow, Kharkov, as well as from every section of Siberia, have come to Harbin to meet with the foreign merchants and order goods. To a large extent this trade has been fostered by refugees from those sections, who saw the opportunities and communicated with the merchants in their old homes. The city is literally packed with people; practically no hotel or room accommodations of any kind are to be had; and, because of the cost and difficulty of procuring building supplies, it will be a long time before the congestion is relieved. The hotels are poor in quality but high in price.

The streets are badly paved. There are no tramways or other means of transportation except by hired carriages, which are dirty and uncomfortable. Laxity in municipal regulations, resulting from disturbed conditions, has placed people at the mercy of the Chinese "izvostchiks," or drivers, whose prices are as exorbitant as their discourtesy is annoying. Hence, in spite of every adverse condition, motor cars are being purchased by all who can afford them, in order to be free from the drivers' tyranny. Motor trucks for goods traffic, however, can not compete with the Chinese cart, because of the bad condition of the streets and the high cost of fuel. Good hotels, paved streets, electric tramways and lighting system, and a modern sewage system are crying needs in the city of Harbin.

Harbin has by far the largest white population of any city in Asia. In summer there are cafés and gardens, music, and good food. In winter there are concerts, public skating and dancing halls, and, in normal times, theatrical companies from Moscow.

The city is well laid out, with an abundance of trees and parks. Americans have successfully introduced many playgrounds for the young people. The Railway Administration has established a "club" and a library for the use of its members; there are also other clubs, chiefly of a commercial or political nature. The places of amusement include three motion-picture theaters and two cafés chantants.

Three private electric companies inadequately supply the city with light, and for several years negotiations have been undertaken to reorganize these companies with foreign capital, as well as to build tramway lines, the need for both being very great. There are two post offices and two telegraph systems, Russian and Chinese. The Russian post and telegraph offices are in New Town, the Chinese post office is located in the Priestan, and the telegraph office is very inconveniently situated in the Chinese city of Fuchiatien, about 3 miles from New Town. The municipal telephone service is under the control of the Chinese Eastern Railway and has about 1,000 subscribers. It is also connected with the Chinese service at Fuchiatien.

FUCHIATIEN.

Adjacent to Harbin and connected with it by a paved road is the Chinese city of Fuchiatien, its left flank girdled by the main line of the railway and its right flank resting upon the Sungari River. Regarded as outside the railway "zone," its administration is wholly Chinese, and its status as a treaty port, for the trade and residence of foreigners, is not admitted. The Japanese, however, have established business houses there.

During the war, Fuchiatien has experienced an unprecedented era of prosperity and the permanent population is now about 100,000, almost wholly Chinese. It is the great market which receives wheat, bean, corn, barley, and hemp products from the interior by cart and river boat. It has its own bourse or money exchange, four principal and many small banks (Chinese), and a chamber of commerce. A number of large firms from South China have lately opened branches at Fuchiatien, but the principal trade of the city is retail. Within the past two years its prosperity has enabled it to begin constructive works of some importance, such as the draining of outlying lands for the establishment of warehouses. It has streets far better paved than those of Harbin. Most important of all, Fuchiatien is constructing a "bund" along the Sungari River front nearly half a mile long and capable of sustaining a very large river traffic. While the big Russian and Chinese river steamers mostly discharge cargo at Priestan, the junk traffic, which reaches all parts of the interior, is discharged at Fuchiatien. As Harbin grows through its importance as a meeting place for Russian and foreign trade, Fuchiatien is sure to profit by its proximity to Harbin and to progress along with the latter city as a center of northern Chinese trade.

KIRIN.

The city of Kirin has about 60,000 inhabitants, nearly all Chinese. The Standard Oil Co. and the British-American Tobacco Co. are the only important foreign firms. Japanese firms, however, are rapidly establishing themselves, particularly in the timber trade. The city is an important shipping point for grain products and timber. Lying in a magnificent lumber region at the head of navigation on the Sungari, it has for generations built most of the junks of Manchuria and boat building is its principal industry. It contains also one of the few breweries now operating in the district.

TSITSIHAR.

Tsitsihar, the capital of Heilungkiang Province, has about 40,000 inhabitants, not including two Chinese infantry regiments, a cavalry troop, and two batteries of artillery that are distributed from there over the Province for the protection of the inhabitants against robber bands. The .Chinese city is connected by an antiquated narrow-gauge railway, 15 miles in length, with the Russian town of the same name on the Chinese Eastern. Russia and Japan maintain vice consulates, but the principal foreign trade is done through resident Chinese agents. The most noteworthy characteristic of Tsitsihar is that a former governor, Chu Ching Lan, was deeply interested in education and established a high school, a school for the soldiers, a school for girls, and several primary and intermediate schools, so that Tsitsihar has the best school system of any North Manchurian town.

OTHER TOWNS.

Station Manchouli (*Manchuria*) has about 12,000 inhabitants and is principally important as being Manchuria's western gateway to Siberia.

Hailar, while nominally in the control of China, is in reality a Mongolian town and the Russian administration there deals principally with the Mongol authorities. It is a range center distinguished for the accumulation of wool, hides, raw skins, cattle, sheep, and horses from the Mongol nomads.

Sansing and *Lahasusu*, on the Sungari, are outposts of the Chinese Customs. Sansing was formerly the center of a very considerable fur trade. It is still the chief city of a fur-trapping region, but the market has removed to Harbin. One foreign firm has a branch there.

Mergen, in the Nonni Valley, is isolated, and is hardly more than a caravan stop between Tsitsihar and Aigun (Taheiho), from which it draws its supplies.

Taheiho, opposite Blagovyestchensk, is destined to become an important town. It is already the seat of the Chinese Customs and of important branches of the British-American Tobacco Co. and the Standard Oil Co. Its largest trade, however, is contraband. The towns along the Chinese Eastern Railway east of Harbin, including the eastern frontier or customs post of Suifenho, or Pogranichnaya, are commercially unimportant.

Imienpo and *Handaohedtze* are summer resorts for the Russian populace of Harbin.

Hulanfu, *Peilintze*, *Suhuaten*, and *Bodune*, in the vicinity of Harbin, are important towns as consumers of oil, cotton goods, and tobacco. They are also centers of export for beans and wheat. Hulanfu has a Chinese population of 30,000, the others considerably less.

PHYSICAL FEATURES.

The outstanding physical features of North Manchuria are two important mountain ranges and two great rivers. The Greater Khingan Mountains run from south to north in western Manchuria, following the general direction of the Argun River, which separates Manchuria from Siberia on the west, to the Amur River, which constitutes the entire northern boundary. Then the range turns east with the flow of the river, follows its general course to the eastern boundary, the Ussuri River, and is known as the Lesser Khingans. The other mountain range, the Khreb-Kente-Aleen (Chinese, Chang-Pai-Shan) runs northeasterly along the eastern boundary of Manchuria to the junction of the Ussuri and Amur Rivers. These ranges are of ordinary height, generally 3,000 to 5,000 feet, the highest peaks scarcely exceeding 8,000 feet. The eastern range is heavily and magnificently wooded with Manchurian pine, hemlock, Manchurian oak, beach, and maple. The Khingans are less wooded; birches, spruces, and scrub oak are the most abundant trees. Both ranges send off spurs toward each other, which meet in the central plain and contain what are believed to be valuable mineral deposits, especially of coal.

The Amur River flows along the whole northern frontier of Manchuria and is navigable to Stretensk in Siberia, a distance of more than 2,000 miles from its mouth at Nikolaevsk, on the Sea of Okhotsk. The Amur is one of the great rivers of the world, being from 1 to 7 miles wide and of great depth through its whole course, except at the mouth, where sand bars are formed by the tides. Since the beginning of the war dredges have kept the harbor at Nikolaevsk open to vessels with a draft of 19 feet. Two Russian steamship companies of large capital each own fleets of more than 100 modern river steamers. These, with many smaller vessels, ply the Amur constantly from April to November, carrying wheat, flour, fish products, kerosene oil, and timber between the large river cities of Nikolaevsk, Habarovsk, Blagovyestchensk, and Stretensk.

The Sungari rises in the eastern range, flows south and west by the city of Kirin to Boduna, on the Mongolian border, where it is joined by the Nonni. Then it turns northeastward via Harbin to Sansing to join the Amur, 450 miles north of Harbin. The Sungari is navigable from Kirin, and the Nonni for small boats from Mergen, at the foot of the Greater Khingans; so that the two are navigable for a length of more than 1,000 miles.

The Argun on the west and the Ussuri on the east are both navigable and pass through a fertile, well-settled country, but neither river has been commercially developed.

The Nonni and the Sungari are joined by many tributaries, nearly all of which are navigable for large junks and drain broad valleys of virgin fertility, capable of supporting a population of millions. In recent years a steady tide of immigration into these valleys has set up from the overcrowded populations of Shantung and Chihli Provinces.

By the treaty of 1858, called the Treaty of Aigun, Russia and China agreed that the Amur and Sungari Rivers should be navigated only by vessels flying the flags of Russia and China. Hence steamers belonging to other nations have not been allowed hitherto on these rivers. In practice, however, Russia has, in the past, always kept the Amur free even of the Chinese flag, and Chinese steamers have been obliged to transship their passengers and cargo to Russian steamers at the mouth of the Sungari. But since the revolution Chinese steamers have been allowed in the Amur, and as it is by no means an accepted principle of international law that these inland waters may be reserved to the flags of only two nations, it is not improbable that steamers of other nationalities may shortly be seen on them. In fact, in the spring of 1918 five large Russian steamers at Harbin were purchased by Japanese firms for navigating the Sungari, and it is not unlikely that they will be operated under the Japanese flag. This will mean, of course, that British, American, or other firms established in Manchuria may enjoy a similar privilege. The Outdoor Branch, or River Customs, of the Chinese Maritime Customs Service has charted the channel of the Sungari and admirably controls its traffic.

These extensive river systems, connecting with the Chinese Eastern Railway at Harbin and Tsitsihar, and with the Amur Railway in Siberia (through its intersection by the Amur River at Stretensk and Habarovsk) not only furnish Manchuria with a great water supply and drainage system, but with unexcelled water routes to take the place of railways and wagon roads. Thus, for example, timber cut in the eastern ranges may be floated down the Sungari, and coal mined in the remote Western Khingans be sent down the Nonni, to meet each other at Harbin; whence they may be shipped north to Siberia by the Sungari, or put on freight cars and sent acrosss to western Europe, or south through Dairen to Japan, or east to Vladivostok and thence to the North American continent. In like manner, on these great rivers and their many tributaries cotton piece goods, kerosene, and other foreign manufactures are borne away to the remote villages in the interior valleys.

POLITICAL ADMINISTRATION.

The zone of the Chinese Eastern Railway is under the administration of the railway authorities, or under Russian law except with regard to non-Russian foreign citizens who enjoy extraterritorial rights. Political administration of the remainder of North Manchuria is in the hands of the Chinese provincial authorities. Kirin City is the capital of Kirin Province and the residence of both a civil and a military governor. Tsitsihar is the capital of Heilungkiang Province, which maintains a special bureau at Harbin for relations with the Russian administration of the Chinese Eastern Railway; but relations affecting non-Russian foreigners are conducted between the governor at Tsitsihar and the several consulates at Harbin.

Chinese administration at Harbin, which is in Kirin Province, is in the hands of a local governor or taoyin, who is likewise special commissioner for foreign affairs and deals with the respective consulates in all matters relating to foreign interests. A special mixed court exists, in conjunction with the Russian authorities, to try cases involving Russian and Chinese litigants. A garrison of about 5,000 Chinese troops is maintained at Harbin under the command of a lieutenant general, and since the end of 1917 Chinese police have temporarily taken over patrol of the Russian city, superseding Russian police. By operation of the treaty of 1896, giving Russia the right to build and operate the Chinese Eastern Railway, the Russian Government conferred upon the management of the railway the right of civil administration of the municipalities within the railway zone. The other foreign powers, however, have not agreed to this as affecting the extraterritorial rights granted to their citizens by the several treaties with China. Questions of jurisdiction were in dispute for 10 years.

In December, 1914, an agreement was ratified between Russia, the railway, and the British Government whereby British subjects submitted to the municipal regulations and taxes imposed by the Russian administration upon Russian subjects, and in return therefor they were admitted to all the privileges, such as land-holding and suffrage, enjoyed by Russian subjects. Police powers were not to be initiated against British subjects except by previous consent of their consulate. Foreign citizens whose Governments adhered to this agreement were to have the right to vote in municipal elections and to be represented by one member, selected by the several interested consuls, upon the municipal council. The agreement has been ratified by Great Britain, France, Japan, Italy, the Netherlands, Belgium, Spain, Denmark, Norway, and Sweden; but the United States did not accept it, and American residents in North Manchuria, therefore, do not vote nor possess the power to hold real property in the zone of the Chinese Eastern Railway. On the other hand, they pay no taxes and are exclusively responsible to and under the jurisdiction of their consulate.

Municipal questions are settled by a municipal council of nine members, at Harbin, of whom one is selected by the consuls and the others chosen by an assembly of delegates from the whole railway settlement. The assembly of delegates is chosen by popular election. All enactments of the several municipal councils in the settlement, however, must receive the approval of the head of the railway administration, and his "obligatory regulations," or mandates, take precedence over them. Prior to December, 1917, Russian police preserved order in the municipalities under the direction of the civil government of the railway. Since that time Chinese police and soldiers have superseded the Russian police, in the main, throughout the railway zone, though a Russian police organization is still nominally in control and exercises limited functions.

From the beginning of the war until December, 1917, only the Russian police examined the papers of foreigners traveling in North Manchuria, and passport stations were established at Kwangchengtze (Changchun), Harbin, Pogranichnaya, Lahasusu (at the mouth of the Sungari), and at Station Manchouli. Russian passport supervision in North Manchuria still exists as a practice, but it is no longer recognized as a right; for in January, 1918, passport supervision was taken over by the Chinese Government and placed under the administration of the Chinese Maritime Customs. Foreigners traveling in North Manchuria are thus usually required to submit their passports for inspection to both Chinese and Russian authorities at the frontier stations and at Harbin. But no obligation rests upon American citizens to submit their passports to the Russian police, either for examination or for registration during their residence in the town, provided they produce satisfactory evidence of their citizenship to their consulate.

AGRICULTURE.

The valley of the Sungari River is the most fertile region of Manchuria. With the exception of fruits, which do not mature well, it is capable of producing in extraordinary abundance practically everything that can be grown in such a northern latitude. Until Chinese farmers moved in a few years ago the whole region was practically virgin soil. It has scarcely been scratched, and scientific methods of cultivation, combined with the proper use of waterways to bring its harvests to market, would make it one of the most productive regions in the world. The Sungari Valley, the rich and rolling, superbly watered, and picturesque country between Kirin and Changchun, and the plains lying about Petuna, Harbin, Hulanfu, and Peituanlintze are commonly referred to as the "granary" of Manchuria. The plains are best for beans, the rolling lands for grains. but all these regions are thinly populated and the methods of cultivation primitive. The area of arable land in Kirin Province has been estimated at 5,800,000 acres, but nearly as much again could be utilized if necessary and if worked by modern methods. There are known to be at least 4,000,000 acres of arable land in Heilungkiang, and the interior of this Province is imperfectly known even to its own officials. A very large portion of Heilungkiang, however, appears to be better suited for sheep and stock raising than for agriculture.

Soya beans, wheat, millet, and kaoliang, in the order named, are the four principal crops, about 90 per cent of the total land under cultivation being devoted to them. Corn, hemp, edible beans, beets, oats, and buckwheat are extensively grown. Edible beans could be grown in enormous quantities for export as food to the rest of the world, but as a matter of fact they are now grown only for the consumption of the population, and the Mancuhrian farmer is extremely loath to offer them in the market. The varieties are unimproved—chiefly of the kinds used for making bean paste. American, British, and Japanese agriculturists, however, are now investigating the possibilities of North Manchuria as a producer of edible beans for export.

SOYA BEANS.

Soya beans appear to suffer because of the mistaken idea that they are too oily to be used as a food. As a matter of fact many Europeans living in Manchuria have tried them and found them, when properly cooked, to be most palatable, besides being very rich in nutritive qualities. Moreover, of the three kinds produced—yellow, green and black—the yellow contains the largest percentage of oil and is the variety almost exclusively exported. There is no reason why the other kinds could not be used as a valuable food. The North Manchuria bean is regarded as a little inferior in quality to that of South Manchuria, as the following analysis would appear to indicate:

	Water.	Fat.	Albumen.	Sugar.	Fiber.	Ash.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Dairen beans	9.23	18.31	24.39	23.97	5.67	6.13
Harbin beans	12.80	17.37	24 36	20.30	4.80	5.98

The estimated soya-bean crop of the Harbin consular district exceeds 1,000,000 tons per year, of which about 50 per cent is now exported to Japan, though formerly going to the United Kingdom and the Netherlands. Recently the exports to Japan, in the form of bean oil, have found their way to the United States. The remainder is consumed locally, chiefly as bean oil, and 90 per cent of the bean cake from the mills is exported as manure or food for horses.

Having become accustomed to selling their beans in rubles, the Chinese farmers will accept only rubles in payment, and the fluctuation of that currency has been so violent that a quotation of prices would be only confusing. At the beginning of the war a good price for soya beans was 65 kopeks, or about $0.33 gold per pood of 36 pounds. Present prices vary, according to the amount of speculation in the local markets, between 5 and 6 rubles per pood, and within the six months preceding the writing of this report that sum represented almost anything between $0.30 gold and $1.

WHEAT.

The usual wheat crop is also about 1,000,000 tons per annum. The best and heaviest wheat grows in the valleys of the Sungari and along the Mutan River, in Kirin Province. This wheat averages over 71 pounds to the bushel, whereas wheat from the other districts sometimes weighs 3 to 5 pounds less. From a bushel of the best wheat 48 to 50 pounds of flour is milled at Harbin. The present market quotation for wheat is 5.30 rubles per pood of 36 pounds; for flour, best quality, 13.80 rubles per pood.

MILLET AND KAOLIANG.

Millet and kaoliang (Kaffir corn) form the principal food of the local Chinese population. North Manchuria produces the best millet and South Manchuria the best kaoliang. The stalks of these plants are also used largely as fodder, fuel, and roofing for the farm houses. They are also used sometimes as a binder for making the mud walls. Something less than 1,000,000 tons of millet and about 600,000 tons of kaoliang are estimated as the annual production of the district. The present local price for kaoliang is 3 rubles per pood.

EFFORTS TO INTRODUCE MODERN FARMING MACHINERY.

Modern agricultural machinery is being very gradually introduced, but the farmers are slow to accept it. Western plows, harrows, cultivators, and even hand tools are practically unknown. The North Manchurian farmer is a man of large family with a rooted belief in the efficacy of hand labor. In the more prosperous districts one often encounters farmhouses that shelter 20 or 30 hired hands in addition to the very large family.

An American firm, however, has persistently worked in this district to introduce improved plows, cultivators, road and farm machinery, and some success has attended its efforts. The most practical advance has been made through a large American experimental farming company that has a concession of many thousand acres for development between the Sungari and Amur Rivers, and leases lands to Chinese farmers for cultivation on modern lines. The company has introduced caterpillar tractors to draw gangplows and a great deal of modern farm machinery. The manager admits, however, that the cost of traction machinery for farming is much higher in Manchuria than that of horse labor, and that he uses machinery only because the multitudinous horseflies and insects, which carry anthrax or other fatal animal diseases during the summer months in that district, have made the use of horses impossible. So long as horse and hand labor are so comparatively cheap, the market for modern agricultural machinery will not be very great.

LIFE AND CHARACTERISTICS OF NORTH MANCHURIAN FARMERS.

The North Manchurian farmer is frequently a man of considerable property, because his tastes are extremely simple, his needs few, and his opportunities for spending money rare. The business of the after-the-war trade seeker is to find some means of exciting in him a desire to improve his condition in life, to create in him new and higher tastes which only foreign trade can satisfy. This will be a more difficult task, probably, than in South China, which is in closer contact with the ideas of Western civilization.

One cause for the rudimentary equipment and furnishings of the Manchurian farmer is his fear of robbers. He does not dare possess things that may stimulate the cupidity of his less fortunate neighbors. The farmers' best defense is to band together in little villages and see to it that they keep nothing on hand that will attract outlaws. But whether standing alone in the midst of the fields or situated in a village, every North Manchurian farmhouse and its outbuildings are inclosed in thick, mud outer walls studded with heavy wooden gates. At nightfall the gates are barred, and the call of a strange voice outside brings the rush of a dozen dogs, trained to rend the intruder, followed by the farmer with his old muzzle-loading gun.

HORSES AND CATTLE.

A large portion of North Manchuria consists of rolling plains, well watered and with abundant grass for the raising of horses and cattle. The lower hills of the Khingans furnish sufficient shelter and food for sheep farming. The abundance of deer in nearly every region indicates the adaptability of the country for the production of sheep. Especially suitable regions for stockraising in Heilungkiang Province are the plains about Tsitsihar and the plateaus west and southwest of Hailar. On both sides of the Sungari and especially about Sansing the conditions for cattle raising are admirable, the only drawback being the presence of great numbers of insect pests in summer. Anthrax and rinderpest are both known, but the latter is rare and measures are being taken to stamp out the former.

There are no statistics as to the number of domestic animals raised in North Manchuria, but it must be very considerable, as every farm is well stocked with horses, cattle, sheep, and hogs. American observers have stated that the cattle and hogs of this district are the best unimproved stock seen anywhere in the East. Mongolian cattle are famous for their beef-producing qualities, while the butter of North Manchuria rivals that of Siberia. Hailar and the western ranges supply the rest of the district with meat for local consumption as well as for export. A British firm has a large meat-packing establishment at Harbin, the product of which is shipped to England, and American stock raisers have under consideration the possibility of introducing stock raising on a large scale in this district when political conditions become settled.

Most of the Manchurian sheep come from the herds of the Mongols. An experiment station has developed the fact that, when crossed with imported rams, the stock is capable of great improvement. Hailar, as the chief market to which the Mongols bring their horses, cattle, and sheep for sale each year, is the center of export for hides, skins, and wool. The wool is coarse in quality and is sold almost exclusively to the United States for the manufacture of carpets. It is separated into two classifications for export—washed and unwashed—the slight difference between them being that of the quantity of dirt which the purchaser pays for.

At the beginning of the war the price of washed wool at Hailar was about 9 rubles per pood of 36 pounds, whereas now it is about 50 rubles.

Manchurian ponies are noted for their speed and stamina. In South China they form the bulk and the best of the racing ponies that have made the tracks of Shanghai and Hankow famous. They are really of Mongolian native stock, rather undersized but sturdy. They have warm coats (which enable them to endure constant exposure to the roughest weather), kind dispositions, and are able to subsist on almost any kind of food. Chinese and Russian soldiers use them almost exclusively for cavalry purposes in Manchuria, while for draft purposes they possess the activity and endurance of mules. Crossed with Russian or other selected sires of imported breeds, they are said to produce unexcelled riding and driving animals. In 1915 good Manchu ponies could be purchased for 60 rubles a head, but the price is now from 300 to 2,000 rubles each.

WILD ANIMALS.

Fifty-five species of mammalia and 268 kinds of birds have been classified in Manchuria. The Siberian tiger, brown and black bear, wild boar, wolf, fox, wapiti or elk, otter, marten, muskrat, sable, skunk, squirrel, and many varieties of deer are found in North Manchuria. The district around Sansing still produces the most sable, but Tsitsihar, Kirin, and Ninguta also send furs to the market at Harbin. These furs, however, are not the equal of Siberian furs (a considerable quantity of which has been smuggled into Manchuria since the Russian prohibition on fur exports), but they are frequently dyed by the Chinese to resemble the Siberian product and sold to the unwary. Travelers looking for furs in the Manchurian market should exercise caution. Since the markets of Leipzig have been closed by the war, the market has been allowed to become depleted of good furs and present stocks are of very inferior quality.

Bustards, geese, ducks, pheasants, quails, and snipe, as well as several varieties of partridge and sage hen, are abundant in many localities. Every year the British Cold Storage Co. ships thousands of head of Manchurian game, especially pheasants and rebchik, and domestic fowls to the London markets, where they are highly prized. In 1915 mallard ducks could be bought in the market for 20 cents (gold) per pair. The Mongolian bustard, a royal game bird, as large as the American wild turkey, used to be frequently brought in by the patient Chinese pot hunter, but the increased wages for laborers have nearly eliminated the pot hunter. Though game is as abundant as ever, the price has increased 700 to 800 per cent.

FISH.

The rivers teem with fish—the Amur and Sungari with salmon, mullet, and carp and the smaller rivers with trout, perch, and eels. The roe of the salmon is largely used when fresh as an article of food by the Russian population, under the name of red caviar. It is cheap, valuable as a food, and is preferred by many to the caviar made from sturgeon roe. On the Sungari and its tributaries every farmer is likewise a fisherman, spreading his nets in the evening and hauling them in at sunrise. The fish are kept alive in huge baskets made of plaited grass (through which the water flows) anchored in the river. Fishing does not constitute a special industry, however, and it is only the casual surplus that finds its way to the markets. Fish can be bought in Harbin for 5 and 6 cents a pound.

MINERALS AND MINING.

The mountainous regions that have been explored by Russian engineers are known to be full of mineral ores, but gold and coal are the only two minerals that have been exploited to any extent. The gold mines of the Moho, a tributary of the Amur, and the banks of the Argun River have been worked for generations by the Chinese with their pan-and-pick methods. There are other gold mines of promise all along the Manchurian bank of the Amur, and a British company has lately begun operations in the district lying between the Amur and the mouth of the Sungari. Gold has been located also in the river valleys between Sansing and the Khreb-Kente-Aleen Mountains, and along the Mutan River. One American company is interested in gold mines in the hills about Suifenho (Pogranichnaya). For many years the principal bullion supply of the Chinese Government came from North Manchurian mines, and there is a tradition that the Moho district at one time yielded as much as 8,000 pounds, troy weight, per month; but the total export of gold from the Harbin consular district for 1915, 1916, and 1917 amounted to $3,658,014, $5,741,317, and $3,441,306 United States currency, respectively. While the gold fields across the Amur in Siberia, especially along the courses of the Shilka and Zeya Rivers, have received a great deal of attention from foreign mining engineers, the promising fields of North Manchuria have been neglected.

In at least three districts coal is found in abundance—along the Ussuri River; at Djalinor, in the vicinity of Station Manchouli; and in the region of the Kan River, which flows into the Nonni below Mergen. The Ussuri and Djalinor fields are in the hands of Russians, who have considerably developed the Ussuri, but have not as yet paid much attention to the Djalinor, because of lack of capital. The Kan River coal deposits are "public lands," belonging to the Heilungkiang provincial government, and are wholly undeveloped, though some coal has been taken from them for use at Tsitsihar. The provincial authorities have wished to place the full mining rights along the Kan River with some foreign concern that would in return make them a provincial loan; but so far the project has not been realized.

Notwithstanding the proved presence of extensive coal fields in North Manchuria, the district still depends principally on the Fushun mines in South Manchuria for its coal supply. Fushun coal, in Japanese hands, is said to be superior to any yet discovered in this region. During the last two years its price at Harbin has been almost prohibitive, and the scarcity seemed to offer a great opportunity for the use of local coals. The disorganization of Russian industrial life, however, prevented North Manchurian producers from grasping their advantage.

The Kan River coal is said to be semianthracite and of high grade. Ussuri coal is bituminous and only slightly inferior to that of the Fushun mines. What has been seen of the Djalinor deposits indicates that this coal has a low point of combustion and liberates a great amount of heat energy, but that the residue of slate and ash is large.

Sulphur, soda, lime, and gypsum are found in considerable quantities, and from some of the marshes and lakes the Chinese Government monopoly collects salt.

TIMBER.

Great areas of North Manchuria are heavily forested, the Sungari River dividing the Khingan Mountain forest areas from those of the Chang-Pai-Shan or Khreb-Kente-Aleen Mountains. The Manchurian pine (*Pinus silvestris*) is the most valuable timber. Manchurian oak, chestnut, birch, walnut, elm, spruce, and willow are also found in several varieties. While many timber concessions have been granted to foreigners, especially to Russians along the zone of the railway and to Japanese along the southern Kirin border, the timber industry is still in its infancy. The total exports of timber during the years 1916 and 1917 were 2,526,194 and 2,677,954 feet, respectively, valued at 5,052,388 rubles in 1916 and 16,067,724 rubles in 1917.

The eastern or Chang-Pai-Shan Mountains contain the heaviest forests and the best timber, pine trees over 200 feet high and 5 feet in diameter being not uncommon. Most timber is shipped as logs 20 to 30 feet in length and 16 to 24 inches square. In its timber qualities Manchurian pine is said to resemble most the so-called Quebec pine.

There are few sawmills and hence nearly all timber is logged out in the rough, the best forests being still remote from transportation lines and but little exploited. The forests in the neighborhood of Kirin City, those along the main stream of the Sungari between Harbin and Sansing, and the heights bordering the Mutan River from Sansing eastward contain the best timber. The woods of the Greater Khingans have been scarcely touched. Along the course of the Chinese Eastern Railway east of Harbin, Russian, British, and French concessionaries have stripped the choice timber from the hills. Stations Hailin and Handaohedtze are the principal points of railroad export, while Kirin City rafts down the river the product of the district between it and Ninguta. Besides heavy timbers for milling purposes, the forests supply the railways of Russia and China with a vast quantity of North Manchurian wood in the form of ties, and the entire fuel of the Chinese Eastern Railway is supplied by these forests. It is estimated that the North Manchurian forests employ about 7,000 woodsmen.

RAILWAYS.

The Chinese Eastern Railway, running east and west across Manchuria from Station Manchouli to Pogranichnaya, and connecting with the South Manchurian Railway by a branch southward from Harbin to Changchun, is the only railway in North Manchuria. It connects the ports of the Pacific Ocean, through its trans-Siberian connections, with the ports of the Baltic and North Seas. A Chinese line, now under Japanese management, runs from Changchun to the city of Kirin. The Ussuri Railway runs along the river of that name from Habarovsk on the Amur to a junction with the Chinese Eastern Railway at Nikolsk-Ussurisk, thus connecting Vladivostok with the newly completed Amur Railway in Siberia. But these railways do not properly belong to North Manchuria. A proposed line, for which the route has been surveyed but no construction begun, is that of the Pin-Hei Railway, for which an agreement was signed between the Russo-Asiatic Bank and the Chinese Government in 1916. The route surveyed lies through the rich central Manchurian plain from Harbin to Mergen, and thence north to Aigun (Taheiho) opposite the large Siberian city of Blagovyestchensk, on the Amur. A branch is to run from Mergen down the valley of the Nonni to connect with the Chinese Eastern Railway at Tsitsihar. When completed this railway will open up immense timber tracts, mining regions, and new farm lands for wheat and bean growers.

Another railway proposed, but not so far advanced, is from Station Hailin on the Chinese Eastern across the heavily timbered slopes of the Khreb-Kente-Aleen Mountains to Ninguta and thence along the Sungari to Kirin.

Both these railways are certain to be built in time, when peace is restored and political conditions in Manchuria become settled.

The Chinese Eastern is a single-track, 5-foot-gauge railway owned by Russia, but built largely with French capital. The treaty of 1896 gave Russia the right to build and operate the railway, and it afforded at the same time the opportunity of taking over political administration of a 14-mile strip through Chinese territory on each side of the line. Hence, all towns, customs and commercial regulations, trade and municipal institutions, along the Chinese Eastern Railway are under Russian control. This, however, does not abrogate the extraterritorial rights granted to foreigners by the several treaties with China; non-Russian foreign residents and their business enterprises are under the jurisdiction of the consular representatives of their several Governments, as in other parts of China. Russian regulations, however, control the railway traffic.

The headquarters of the railway administration and the workshops are located at Harbin. There are 14,000 employees, and most of the Russian population of Manchuria is supported by the railway. During 1916 and 1917 its traffic and receipts were:

Items.	1916	1917
Passengers .... number..	2,077,585	2,441,221
Freight .... tons..	2,951,345	2,685,197
Gross revenue .... rubles..	50,498,525	71,771,867
Net income .... do....	16,995,811	23,179,779

Because of the decline in the value of the ruble since the beginning of the war, and its monopoly of the traffic, the Chinese Eastern Railway has increased its freight and passenger tariffs more than sevenfold since July, 1914. Hence, at the present time freight and passenger charges on this railway are probably higher than on any other line in the world. For example, ordinary first-class fare from Changchun to Harbin on the weekly express (now temporarily discontinued), together with a "place card," is 135 rubles, or about $14 gold for a trip of 142 miles. Formerly the fare was only 15.25 rubles. The free luggage allowance for passengers has been recently abolished, and only hand luggage that may be carried in the compartment without inconvenience is permitted without charge. The charges on other baggage are very high.

Present freight rates on various commodities between the same two points are as follows:

Articles.	Harbin to Changchun.		Changchun to Harbin.	
	Per pood.	Per pood, in carload shipments.	Per pood.	Per pood, in carload shipments.
	Rubles.	*Rubles.*	*Rubles.*	*Rubles.*
Grains		1.070		0.664
Cotton piece goods	2.184		2.421	
Machinery	1.532		2.184	
Iron and steel	.973		1.316	
Kerosene		1.512		1.778
Coal		.315		.399
Lumber:				
First grade		.574		1.015
Second grade		.553		.854
Salt		.574		.812
Sugar (cube)	1.778		2.471	
Bean oil		1.316		.973
Shoes and boots	2.184		2.471	

Loading and unloading charges are to be paid by the shipper or receiver. Charges for weighing in bulk are being collected at 10.50 rubles per car.

In addition to the ordinary freight charges, a municipal tax of 1 per cent is levied on imported articles, and an unfortunate practice exists of furtively levying certain other charges that can not always be specified.

Foreign goods destined for North Manchuria are shipped to the port of Dairen, with transshipment usually at Kobe or Shanghai. Another route before the war was either direct or via Japan to Vladivostok; but since the beginning of the war the Chinese Eastern Railway has been so short of freight cars and so congested with the transportation of military supplies that the port of Vladivostok has been used almost exclusively for through shipments to Russia. Goods shipped through Dairen, in addition to the previous transshipment at Kobe or Shanghai, are removed from the docks to the cars of the South Manchuria Railway and freighted to Changchun. Here they are again transshipped, usually by Japanese or Russian forwarding agents, to the cars of the Chinese Eastern and forwarded to Harbin. Here, if intended for the interior, they are transferred to Chinese carts, in the winter time only, for hauling up country, or to the steamboats and junks that ply the Sungari River. If intended for consumption farther west or in Siberia, they are transferred to the main line of the Chinese Eastern Railway. All these transshipments cause delay and expense, but during the war they have generally proved preferable to the uncertainties of shipping via Vladivostok.

POST AND TRADE ROUTES.

In Manchuria there are no roads, as western people think of roads, except the short streets found in the towns. Except in Kirin and Harbin these are unpaved, and the streets of Harbin are for the most part wretchedly paved. The so-called post roads of Manchuria are merely traditional pathways marked out by horse and cattle tracks in countless journeys. In winter they are unbelievably rough, but serviceable. The mud is almost without bottom in wet weather, and the dust is blinding when it is dry. There is a famous post road running from Peking northeast to Mukden, thence to Kirin city, and thence north via Ashiho and Tsitsihar, the capital of Heilungkiang Province, to Aigun; but it is now in the same condition as the others and is used only by the local farmers. A post road still in use both for mail and traffic, especially furs and timber, runs from Kirin northeast to Ninguta and thence northwest to Sansing on the Sungari, about 400 miles. It connects at Kirin with another famous road that passes through South Manchuria to Antung and is the favorite route by which in the early years of the war German and Austrian war prisoners escaped from the prison camps of eastern Siberia into China.

In winter all traffic from the bean and grain fields is by two-wheeled Chinese carts, drawn by from 6 to 20 ponies, down the ice-covered watercourses or over the frozen roads. In summer junks bring the crops down the rivers to the Chinese city (called Fuchiatien) at Harbin, and return to their native places with kerosene oil or cotton goods. A large "bund" for the accommodation of this rapidly growing river trade was begun by the Chinese Government at Fuchiatien during 1917, and will be completed by 1919.

Outside the towns motor traffic is impossible. Where neither river nor railway reaches the villages and carts can not make their way, mail carriers go on horseback, accompanied by Chinese soldiers to guard them from the wandering bands of marauders. In the west, along the Mongolian borders, caravans of two-humped camels are used occasionally to carry to market the products of the nomadic Mongols.

NEWSPAPERS.

At Harbin two important newspapers are published in the Chinese language and three in the Russian. The Chinese papers are the Yuan Tung Jih Pao and Tung Tsui Shang Pao; the Russian are the Novosti Zhizni, Trud, and Vestnik Manchurii. The Chinese papers are chiefly official and have no great value as advertising mediums. The two largest Russian newspapers claim a daily circulation of 7,000 and 4,000 copies, respectively. Because of the variations of the ruble, the price of advertising space can not be given, though in general it may be said to average 3.75 rubles per column inch. Advertisements are accepted in both the English and Russian languages, but naturally the English clientele is small.

Posters and handbills may be printed and distributed, as elsewhere, but the Russians do not think highly of this sort of advertising for commercial purposes.

FINANCE AND BANKING.

Harbin is not only the *main* center of North Manchurian commerce but it is practically the *only* center so far as foreign trade is concerned. All the trading and commercial machinery of the district is assembled there. The International Banking Corporation (American), the Hongkong & Shanghai Banking Corporation (British), the Russo-Asiatic Bank and the Harbin Mutual Credit Association (Russian), the Yokohama Specie Bank and the Bank of Chosen (Japanese) are the six principal banks that engage in the business of foreign exchange. At Fuchiatien there are three principal Chinese banks, the Bank of China, the Bank of Communications, and the Territorial Development Bank, which do an exchange business, principally with the Chinese. The French Banque Industrielle de Chine, of Peking, has acquired the building site for erecting a branch of its Peking house. The Harbin branch of the Russo-Asiatic Bank has lately been removed from the control of the Russian Government at Petrograd and placed on the same basis as other foreign banks in China. Foreign exchange rates are quoted by these banks independently of each other, and on a given day their rates may vary to an appreciable extent. The Asia Banking Corporation (American) has under consideration a plan for the establishment of a branch at Harbin.

There is no official bourse, or money exchange market, but the unsettled currency conditions of 1916-17 have led to the formation of an unofficial bourse among the merchants and traders of the Priestan, which has had a very speculative effect on the exchange rates, especially on the ruble. In fact, during the first half of 1918, trade being almost at a standstill, the second-class merchants and the Chinese devoted their talents almost exclusively to speculations in the money market. On account of such speculations, of the high price of silver (which is the currency basis of China), of the exceptional demand for gold yen with which to pay for imports from Japan, and of the political and economic circumstances responsible for the fluctuations of the ruble, exchange at Harbin is a tricky and complicated factor in every commercial transaction. The consulate has, for the last two years, advised but one course for American firms in the United States as well as for their representatives in Manchuria—namely, to quote all prices in gold dollars c. i. f. Dairen, and leave the buyer to arrange the business of exchange at his own risk. The only safe alternative is to settle exchange with the bank at the time of acceptance of the order. Any other course is simply a dangerous speculation, which has frequently led to the breaking of contracts and litigation or to loss.

In the zone of the Chinese Eastern Railway the Russian ruble is the "legal" currency. It was imposed upon North Manchuria by the Russian Government after the Russo-Japanese war and has occupied that status ever since. But its present instability has caused its legality to be questioned; so that it may be regarded as doubtful whether any form of money can be insisted upon as legal. Because of the ruble's instability, the Japanese gold yen is currently used as the theoretical basis for fixing the values of other money. The objection to the Chinese dollar is that in North Manchuria its circulation is very limited. The "diao," or provincial note, has no circulation among the foreign firms but is used as a basis of quotation only. The same is true of the "small-coin" dollar. But while the actual circulation of the yen is increasing and the ruble continues to be discredited, such is the power of custom that the ruble universally circulates in business transactions, both large and small.

Fluctuation in the exchange value of the ruble during the war has been greater at Harbin, probably, than anywhere else, because of local speculations and the peculiar relations of the ruble to the local trade. Its normal value before the war was about $0.515. By the beginning of 1915 it had fallen to 245 rubles for $100 gold. It passed the 300 mark in December, 1916, then fell suddenly beyond 400 rubles to $100 gold because the banks refused to accept it for foreign exchange. Afterwards this policy was reversed, and until after the revolution its value was generally about 360 rubles to $100 gold. The revolutionary movements in Russia during the summer of 1917 forced it still further down until in October it had fallen to 1,000 rubles to $100 gold and in December, 1917, to 1,900 rubles.

In spite of proofs of the excessive overissue of the ruble in Russia, with no gold to back it, and of the possibility that it would be repudiated, the Chinese farmers who were accustomed to it still insisted upon rubles in payment for their beans. Delivery of the new bean crop commenced in January, and there came an immediate demand for the despised currency which everyone had been trying to get rid of. In six weeks the price was forced up from 1,900 to 600 rubles per $100 gold. As prices for all local commodities and goods for export had been readjusted on the basis of a value for the ruble of $0.05 gold, and as these prices were not altered by its sudden rise to a value of $0.16⅔ gold, the cost of local stocks became almost prohibitive.

The foregoing is an illustration of the conservatism of the trade, for naturally the Russian population is even more attached to the ruble than the Chinese. Hence all efforts to divert the local medium of exchange to some other currency have been futile. It is plain, then, that the prices of commodities at Harbin are not subject to regulation or future estimate, and that, viewed from the currency standpoint, all local trade is on a basis no better than that of simple speculation as to what the ruble will do.

MANUFACTURING AND OTHER INDUSTRIES.

North Manchuria is so exclusively an agricultural country that it has developed no industries on any considerable scale. Flour milling, bean-oil production, and the making of beer or vodka are exceptions to a certain extent. As the breweries and vodka distilleries were nearly all within the area of the Chinese Eastern Railway they were subject to the imperial prohibition imposed by Russia on the production of alcoholic liquors soon after the beginning of the war. The large flour mills at Harbin, Ashiho, Imienpo, Hailin, and Shwangchengfu, owned by Russians and Chinese (except one belonging to a Japanese firm), have a capacity of 250,000 tons annually, but the total output in 1916 and 1917 was 200,000 tons and 228,285 tons, respectively. Old-fashioned stone mills for grinding wheat, worked by hand or by mule and pony power, are found in nearly every Chinese village, but their product is wholly consumed by the villagers. An average daily output for one of these mills is not more than 100 pounds. Prior to the war Harbin flour was exported almost exclusively to Siberia, but a war tax of 45 kopeks on flour, while wheat was admitted free, caused wheat exports to be substituted for flour. At the same time a reduction of the supply in South China from American mills led to the exportation of Harbin flour to Shanghai. Harbin flour is noted for its nutritive qualities, its color being slightly yellower than that of American flours, but it is said to possess poor shipping qualities, the amount of water contained in it exceeding 15 per cent. If this is the case it is doubtful whether it can be shipped successfully to Europe, or even to the United States.

At Harbin there are three modern bean-oil mills, but the extraction of oil from beans is carried on rather extensively in the villages by means of primitive hand presses. It is estimated that there are approximately 1,000 primitive oil mills in North Manchuria, and that two-thirds of their product is used locally. Nearly the whole of the bean cake left after the oil has been pressed out is sent abroad. The quantity of bean oil exported in 1916 and 1917, according to the Harbin customs figures, was 9,596,260 and 7,801,138 pounds, and of bean cake 75,592 and 116,620 tons, respectively. Castor oil, sesame oil, thyme oil, and cottonseed oil are produced only in South Manchuria.

Bricks and tiles, and earthenware of coarse varieties and crude design, are manufactured in small native establishments at Harbin, Hailar, Ninguta, and Kirin. They are sold to the local population and have little export value.

Leather is tanned, and furs are cured by Chinese primitive establishments at Hailar, Changchun, Hulan, Kirin, and Sansing. The leather is used only by the Chinese local population. The furs are sent to Harbin, which is an important market. Cotton-cloth manufacture and weaving are unknown, but at Tsitsihar, Hailar, and Petuna, a town on the Mongolian border, there is some manufacture of coarse woolen blankets of little export value.

Other local industries that have no importance, except as regards immediate home consumption, are those of dyeing, the manufacture of hemp cord and ropes, and of such furniture and hardware as a primitive community requires. This is all accomplished by the crudest of hand labor. In Harbin, however, practically all the furniture used by foreigners is now made by Chinese carpenters, who are extremely clever in copying foreign designs. There is no modern manufacture in North Manchuria of porcelains and potteries, of brasses and bronzes, of rare "antiques" and artistic furniture, such as have made the craftsmen of South China famous.

EXPORT TRADE.

Russia, China proper, Japan, the Netherlands, Great Britain, and Denmark were the chief markets for Manchurian products prior to the war. With the exception of Japan these markets were cut off from time to time during the war and the United States was introduced as a new market. But the recent raising of the embargo has again permitted exports into Russia.

The principal exports are soya beans and bean cake, wheat and flour, millet, kaoliang, hemp seed, wool, hides, skins, furs, and meat products. For bean and bean oil, as for wheat and flour, war conditions greatly increased the demand. In the other commodities the trade suffered. The increased movement of wheat, flour, and timber to the more southern districts of China, because of the cutting off of supplies from the United States, was especially heavy. In 1914 the export of flour to South Manchuria amounted to 12,540 tons, and of wheat to 12,063 tons. In 1916, 22,222 tons of flour and 31,746 tons of wheat were sent south. The total export of lumber in 1917 was 47,821 tons, of which 46,711 tons was exported via the South Manchuria Railway.

The following table shows the value in United States currency of the principal articles exported from the Harbin consular district in 1917 and 1918, through the customhouses at Harbin, Manchouli, Suifenho, Aigun, and Sansing:

Articles.	1917	1918
Animals, live:		
Cattle, sheep, goats, and pigs	$552,180	$635,784
Horses and mules	1,134	3,381
Poultry	11,670	4,078
Bean cake	2,117,085	631,314
Beans	10,297,469	1,475,442
Breadstuffs:		
Bran	124,173	50,153
Flour	1,653,793	....
Grain, all kinds	4,263,290	1,010,728
Vermicelli and macaroni	19,129	15,155
Clothing, all kinds	467,488	553,178
Eggs, fresh and preserved	472,977	119,500
Fish and fishery products	438,235	32,181
Furs	9,593	....
Groundnuts, etc	$119,120	$3,526
Hides and skins, undressed	281,731	29,179
Meat products:		
Lard	626,407	251,670
Meats	1,633,443	1,236,239
Tallow, animal	2,349,180	36,290
Oil, vegetable	698,370	129,581
Provisions and vegetables	655,161	85,651
Seeds	256,794	15,464
Sugar	253,657	94,339
Tea	57,347	172,906
Timber	26,966	7,576
All other articles	5,586,952	624,632
Total	33,073,344	7,217,947

The following table shows the value in United States currency of the articles declared at the Harbin consulate for exportation to the United States during the years 1913, 1917, and 1918:

Articles.	1913	1917	1918
Antiques, Chinese	....	$3,510	....
Beans, soya	....	374,512	....
Bristles	....	....	$13,493
Furs	$23,073	302,249	603,564
Hair:			
Camel	....	50,529	....
Horse	....	....	10,054
Hides and skins	58,567	59,115	4,905
Intestines (sheep, salted)	....	....	23,924
Wool, sheep	....	696,351	154,046
Total	81,640	1,486,266	809,986

IMPORT TRADE.

Before the beginning of the war the Harbin district supplied its principal needs by importations from Russia, Germany, and Austria, Russia naturally furnishing the largest amounts. In the order of quantity the principal supplies from Russia to this region were kerosene oil, spirits, metal wares, clothing, soap, women's garments, haberdashery, rubber shoes, tobacco, boots and shoes. From Germany, North Manchuria imported iron of all kinds, steel, tin, lead, solder, machinery, brass and other metal products, electrical supplies, lamp ware, paper and cardboard, underwear, office supplies, medicines and chemicals, groceries, enameled ware, gunny bags (for flour; gunny bags for the exportation of beans were imported from British firms in China which brought them from India), knitted wear, canned goods, cigars, leather goods, and hardware. Austria supplied the principal lines of shoes, hats, women's clothing, and haberdashery. Imports from the United States were principally kerosene oil and canned goods. Aside from Russia, Germany had the largest and most comprehensive trade. Cut off from the German and Austrian sources of supply, the district continued to obtain its principal imports from Russia until the middle of 1916, when that source of supply failed. Japan, in the meantime, introduced its products in great variety, but a preference for the products of the United States developed and, with the exception of silk goods and piece goods, leather cases, umbrellas, and fancy articles from Japan, nearly every foreign-made article now seen in this market is "Made in America." Kerosene and its by-products, shoes and leather, hardware, machinery, manufactures of iron and wires, canned foods, coffee, chemicals and drugs, and automobiles lead the list of imports from America.

The Harbin Customs figures on imports into this district are not even approximately correct, because since the end of 1915 most of the imports have come through Dairen and paid duty there. As the statistics for such imports can not be separated from the figures for South Manchuria, it is impossible even to approximate the quantity and value of the imports billed to Harbin.[1] Below are the Customs figures, for what they are worth, showing the value in United States currency of the imports into the Harbin consular district in 1917 and 1918, through the customhouses at Harbin, Manchouli, Suifenho, Aigun, and Sansing:

Articles.	1917	1918
Asbestos	$111,720	$4,768
Bags	48,510	58,196
Books and charts	12,769	380
Boots and shoes	18,077	52,228
Butter and cheese	376	160,084
Cement	76,914	48,953
Clocks and watches	1,598	47
Coal and coke	172,437	301,586
Coffee	....	7,562
Corks	7,268	2,191
Cotton goods:		
Piece goods	48,106	178,831
Blankets, towels, and handkerchiefs	1,840	3,353
Waste and wadding	439	3,519
Yarn	2,322	6,230
Fish and fishery products	98,272	269,633
Fruits and vegetables	135,180	94,593
Furs	217,800	451,058
Glass and glassware	281,189	88,504
Groundnuts	262	298
Horns, deer	20,200	49,165
India rubber and gutta-percha	....	9,066
Iron and steel:		
Manufactures of, including hardware	245,019	192,322
Machinery and fittings	57,775	50,061
Railway plant and material	245,901	558,193
Sheets and plates	42,102	10,912
Oils:		
Engine, lubricating	....	$13,000
Kerosene (Russian)	$126,028	8,041
Paper	8,803	11,349
Perfumery	24,244	3,348
Photographic materials	21,526	75,498
Soap	17,106	1,011
Sugar:		
White	11,145	6,098
Refined	64,868	59
Tea	230,066	170,521
Tobacco, and manufactures of:		
Cigarettes	786	5,132
Leaf	....	11,487
Tobacconists' sundries	27,281	....
Vehicles:		
Locomotives and tenders	3,605,764	106,172
Railway carriages	22,590	5,988
Motor cars, cycles, etc	12,116	26,236
Wines, spirits, and malt liquors	57,641	110,901
Wood, all kinds	156,829	497,125
All other articles	2,182,251	1,025,437
Total	8,415,120	4,679,136

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[1] **Editor's Note.**—Because of the fact that the Harbin Customs figures do not afford a real indication of the extent of the trade or a legitimate basis of comparison, no attempt has been made to furnish figures for 1904 and 1913, as in the case of the other consular districts.

CUSTOMS DUTIES.

Imports to North Manchuria pay the Chinese customs duty, ordinarily 5 per cent ad valorem, at the port of entry. Goods via Japan pay duty at Dairen, those via Vladivostok pay the Manchurian duty at Pogranichnaya. Goods for export on the Sungari must produce an exemption certificate or proof that they have previously paid at the port of entry. In case the original shipment or package is broken, proof is not considered and an additional river tax of 2 per cent ad valorem is levied. Export duties, where the shipment is not by river—as, for instance, to Siberian points via the frontier stations of Suifenho and Manchouli—are collected at the frontier ports, not at Harbin, by the Russian Customs. For 1917 the export duties collected were:

		Rubles.	Kopecks.
Bean cake	per pood		20
Beans	do.		33
Cigarettes	per pound	9	30
Fish:			
Fresh	per pood		30
In tins	do.	7	50
Flour	do.		70
Furs	do.	16	50
Hides:			
Dry	do.		83
Wet	do.		44
Meat, fresh or frozen	do.		20
Oil, bean	do.	3	65
Tea	do.	33	50
Tea, brick:			
Black	do.	19	60
Green	do.	15	60
Timber:			
Logs	do.		10
Beams	do.		17
Lumber	do.		44
Tobacco	do.	45	00
Wool:			
Unwashed	do.	1	50
Washed	do.	3	50

LACK OF PARCEL-POST FACILITIES.

Parcels by post from the United States never reach North Manchuria if routed by Japan instead of specifically routed via Shanghai. The reason for this is that Japan has no parcel-post arrangement with China that extends to this district. The result is that parcels addressed to Harbin from the United States are usually transshipped in Japan to the postal service for South Manchuria. They are carried as far as Changchun, on the principle that this is the nearest Japanese post office, and from there they are returned to the sender. Japan is now endeavoring to establish a post office at Harbin, which will also handle parcels.

FORWARDING COMPANIES AND LOCAL AGENTS.

There are one English and two Japanese forwarding agents at Dairen, one Russian forwarding agent at Changchun, and one Russian and two Japanese agencies at Harbin that receive and forward shipments to their destinations in North Manchuria.

With the exception of the several foreign firms at Harbin, a list of which may be procured from the Bureau of Foreign and Domestic Commerce, the employment of local agencies by American firms can not be advised during present disturbed commercial and political conditions. It is strongly recommended, however, that American firms send their own traveling representatives to Harbin, who might have no difficulty in finding reliable agents to handle their goods afterwards.

TRADE ORGANIZATIONS.

The American business men have organized the American Merchants' Association of Harbin, and the British have a British Chamber of Commerce. There is also a Russian-American International Commerce Association, lately organized and composed only of residents of both nationalities interested in promoting mutual relations between the two countries. A somewhat similar organization has been formed by Russian and Japanese merchants.

The more formal organizations of the commercial classes, however, are the Harbin Chamber of Commerce and the Chinese Chamber of Commerce.

GENERAL TRADE SUGGESTIONS.

CREDITS.

The Germans had the best part of the foreign trade in North Manchuria, principally because they were organized to extend long credits and to "nurse" them carefully. When the war came on, Russian and Chinese buyers had great difficulty in adjusting themselves to short credits or cash payments. They were accustomed to receiving as much as nine months' credit, and in some instances with large firms it was even the custom for the seller to deposit 10 or 15 per cent of the order value, in cash, with the buyer at the time of taking the order, as a guaranty that it would be filled. The general demand of American houses for bankers' credits in the United States with order could not be met. After a time, however, American seller and Manchurian buyer effected a sort of compromise upon a basis of 25 per cent cash with order and the balance against documents at port of delivery. Manchurian buyers have become accustomed to this arrangement now, and it is not advisable to change it, for the present at least. The former pride in long credits as an indication of the firm's standing is being superseded by a healthier pride in its ability to pay cash.

Under present conditions, however, the buyers are capricious, and it behooves the seller who would not take serious risks to see that he fulfills the conditions of his contract to the letter. Whenever possible, if acceptance of the shipment is not to his advantage the Manchurian buyer is tempted to take advantage of the times and to use any variation on the seller's part from the terms of the contract as an excuse for refusing to take delivery. Time of delivery, quality according to sample and capable of proof, and the proper packing of the goods are points that demand the most careful attention of the American exporter if he aspires to a market in the Harbin district. The frequent transshipments between interior points of the United States and Harbin compel extra attention to care in packing if shipments are to reach their destination undamaged.

From the foregoing it will be seen that under present conditions the extension of credits can not be considered as advisable—as it might be in other markets. The basis of "all quotations in gold, 25 per cent with order and cash against shipping documents, payable at one of the local banks," is regarded as the most acceptable method.

BUSINESS AND COMMERCIAL CUSTOMS.

As in other parts of China, every established foreign firm has its "comprador", a Chinese of business experience and well acquainted with the district, who arranges all the firm's business with Chinese customers. He usually works upon a joint salary and commission basis. Trade with Russians is sometimes conducted directly between the firm and the buyer, but in most cases it is done through one of the many so-called brokers whose unfortunate business ventures have reduced them to the necessity of finding customers for other people. The size of the commission for introducing a buyer may be fixed, or it may depend upon the size of the order. Not infrequently the broker so negotiates as to get commissions from both buyer and seller on the same transaction.

There are practically no jobbing houses and few wholesale houses (as Americans understand the terms) which deal in special lines for sale to the trade. Except for a few foreign firms, Harbin firms either order for themselves and retail directly to customers, or order only goods that they have already sold to buyers from Russia. In other words, except for their own local trade they are in reality merely brokers who keep no stocks on hand. Neither do they, generally, deal in specialties, the exceptions being a few foreign firms that devote themselves exclusively to beans or to the importation of sugar and piece goods. The average Harbin importer will buy or sell anything on which he can make a profit. He will ship skins and wool to New York and bring back gramophones to sell in Siberia.

The exporter generally has only an office, his clerks, and his samples. A very few of the principal ones have large godowns, or warehouses, and keep stocks on hand. For the rest, their Chinese agents go out in the interior villages and buy from the middlemen there, who in turn negotiate with the farmers or producers through lesser middlemen. The most expert American seed buyer can not go among the Chinese farmers and buy his seed direct. His very appearance would be certain to treble the price. Moreover, the farmers would be suspicious of his standing and motives. Nor will the producer, as a rule, bring his goods into market. He waits in his place for the middleman to come to him; the middleman must even arrange to get the goods transported to market.

In buying wool and live stock a special custom must be carried out with the Mongols. The wool buyer sends his agents among them in the early autumn to look over the promise of their flocks. From the appearance of the animals the agent estimates the probable spring yield. He then advances the Mongol a sufficient sum to feed the sheep through the winter and insure the appearance of the wool in the spring market. In return for this advance he has no further lien on the Mongol's wool than the latter's promise that on market day he will have the first opportunity to buy it at the market price. A rival who has risked nothing may get the wool if he offers more money.

Of course, if the rival gets the wool, the original negotiator *may* be able to find the Mongol and get his money back before it has been spent.

LANGUAGES.

Correspondence with all banks and with the non-Russian foreign firms may be carried on in English. In correspondence with Chinese firms the English and Russian languages are of about equal value. But the commercial language of the district is Russian. As a rule, Russian merchants who receive business letters or catalogues in English give them just a little less attention than the average buyer in the United States would give to letters and catalogues addressed to him in Russian.

A good many American firms, having been educated to the preparation of literature in the Spanish language for the use of Latin-American firms, consider that they have done their whole duty in the struggle for Manchurian trade when they write a letter in Spanish to a Russian firm in Harbin and inclose price lists and catalogues in the Spanish language. It is unnecessary to comment on such a practice.

METHODS OF DEVELOPING TRADE.

It should be remembered always that the bulk of future sales to North Manchuria will be destined for consumption in Russia or by Russians, and that to gain the Russian market one must go after it with the aim to meet the Russian buyer's demands, not to satisfy the convenience of the seller. The German organized his facilities for gaining and holding Russian trade. He used his organization intelligently to introduce his goods into the market and to keep them there. He used it to cultivate the trade assiduously, to hold his credits, and to gather his cash when it fell due. Especially the German exporter gave the Russian what he asked for, manufactured it to his taste, and delivered it in the form that he wanted. He seldom tried to sell to the Russian goods that he had manufactured for somebody else or for home consumption and could not dispose of elsewhere. The American will have to do the same if he wants to get the business.

Catalogues and price lists for Harbin should be truthfully illustrated and in convenient form. They should be *in the Russian language.* They may be accompanied by terse business letters calling brief attention to their contents; but the average grandiloquent communication of the American export sales manager fails to accomplish its purpose in the North Manchurian field.

Commercial travelers in this district ought to have a knowledge of the Russian language sufficient for an ordinary trade conversation. The Russian buyer is a very human person. More perhaps than any other business man, he not only appreciates but demands personal contact. Impersonal relations, however businesslike and attractive the proposition advanced, most often lead to nothing. No amount of attractive literature can accomplish as much as a single visit from even the very ordinary salesman who has a capacity for establishing friendly relations. The salesman must possess patience and sympathy. Personal relations being established by way of tea and talk, business is introduced casually and the prospective client educated to an appreciation of the attractions of the line. One can not hurry the Russian business man.

Interpreters are difficult to procure and not always trustworthy. They make, moreover, a third party to the contract, and both Russian and Chinese merchants like to feel that their business is a secret between themselves and the party of the second part.

NOTE.

The value of the ruble having fluctuated violently from 100 rubles = $51.50 gold to 1,900 rubles = $100 gold during the war, quotations in gold would be meaningless. Hence, for purposes of comparison all values in the foregoing report (except in the export and import tables), are quoted in rubles. The value of the ruble in June, 1918, when the report was written, was about $0.10 gold.

All statistics of imports and exports have been taken from the Harbin Customs Returns, and the goods that passed through Changchun (which comprise the great bulk of the trade) are not given in the returns.

For example, American kerosene oil and shoes are not on the list of articles imported, according to the Customs figures. Yet the Standard Oil Co. sold 1,500,000 gallons of kerosene, while more than 1,000,000 pairs of shoes were imported during the year into the district for resale to Russia. In the list of articles exported from Harbin via Changchun, beans, bean cake, hides, and furs do not appear. Of course, these exports, as well as the imports of oil and shoes, are included in the customs returns for the port of Dairen, but North Manchuria's proportion of this trade does not appear.

NANKING CONSULAR DISTRICT.

By Vice Consul Alvin W. Gilbert.

LOCATION AND AREA.

The Nanking consular district comprises all of Anhwei Province and all of Kiangsu Province north of the Yangtze River, as well as the two districts of Nanking and Chinkiang south of the river. It lies between 29° and 35° north latitude and 115° and 122° east longitude. It extends along the coast from the mouth of the Yangtze River on the south to the boundary of Shantung Province on the north, and extends inland to the borders of Honan, Hupeh, and Kiangsi on the west and to those of Kiangsi and Chekiang on the south. Its corresponding latitude in North America would be between lines drawn from (*a*) a little north of Los Angeles and (*b*) San Fernando (Lower California), on the Pacific coast, to Cape Hatteras and St. Augustine, Fla., respectively, on the Atlantic seaboard. The northern line would pass about 4° north of the Bermuda Islands in the western Atlantic; while an extension of the southern line would divide the Suez Canal and cross the mouth of the Euphrates at the head of the Persian Gulf. The district is in the north-central part of China.

The area of this consular district is about 87,000 square miles. The part of Kiangsu included in the district comprises about 32,000 square miles, having about the same area as Maine, or the combined area of Massachusetts, New Jersey, New Hampshire, and Vermont. The Province of Anhwei, with its 55,000 square miles, is a little larger than North Carolina, or Virginia and Maryland combined, or one-half as large as Nevada.

POPULATION.

The estimated population of the district is about 57,000,000, or 655 to the square mile. The Province of Anhwei, with its 36,000,000 inhabitants, has a population equal to that of Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Missouri, Wisconsin, and Pennsylvania combined, although the area of the States named is more than four times as great. The Kiangsu population equals the combined population of Alabama, California, Indiana, Illinois, and Kansas, whose area is fourteen times as great.

The lines between urban and rural population in China are not so distinct as in the United States. The farmers, as a rule, live in small villages, as well as in the cities, as a means of protection against bandits. The rural population is variously estimated to comprise from 75 to 85 per cent of the total number of inhabitants.

PHYSICAL FEATURES.

The Province of Kiangsu is essentially a well-watered plain, broken by the range of hills between Nanking and Chinkiang. The Yangtze River crosses its southern part and the Grand Canal extends throughout its entire length from north to south. The two watercourses form the basis of the series of canals and tributaries which make the Province one of the best-watered sections in China. Its general features correspond to the lowlands of the Mississippi Valley, and the sections along the canal and the Yangtze River are subject to inundation at high water. A large section between Yencheng and the coast is given over to the Government salt industry, and, because of sodium deposits, is not suitable for farming purposes. The large Hungtze Lake, in the northwestern part, takes the overflow of the Hwai River and empties it into the Grand Canal. This formerly busy trade route is now higher in places than the adjoining plain, which affords an explanation for the inundations above mentioned.

Anhwei Province resembles the rolling plains of Iowa, and while somewhat broken by mineral ranges both north and south of the Yangtze River, is well watered by the Yangtze River in the south and the Hwai River in the north. In the extreme southwest are the Pe and Singan Rivers.

CLIMATE.

The climate of the district varies from that of semitropical Texas in the south to the extreme cold of Pennsylvania in the north. Nanking may be regarded as in the medium climate of the district. Its temperature (13° to 97°) and rainfall (56 inches) in 1915 are typical of the section. The rainfall (48 inches) is heavier, but the extremes of temperature (10° to 102°), are not so great as in the Hwai River country to the north, where the climate of the Middle Western States prevails.

Spring along the Yangtze River is the rainy season. Cherries ripen the last of April and strawberries the middle of May. The spring and autumn months are usually comfortably cool. June is the rainy month along the Yangtze, with about one-fourth of the annual rainfall.

POLITICAL SUBDIVISIONS.

The Provinces are subdivided into tao (counties) for the purposes of civil administration. Each tao is governed by an official called a taoyin, who resides in the principal city. Each tao is subdivided into hsien, in which the magistrate hears all civil cases. A foreign consular officer is authorized by treaty to participate in all cases involving the interests of his nationals.

The following is a list of the tao and the number of hsien in this district:

Kiangsu Province.—Hsuhai Tao, 11 hsien; Hwaiyang Tao, 13 hsien; Suchang Tao, 3 hsien in the Nanking consular district; Huhai Tao, 1 hsien in this district; Ginling Tao (Nanking), 18 hsien.

Anhwei Province.—Hwaissu Tao, 21 hsien; Anking Tao, 15 hsien; Wuhu Tao, 24 hsien.

Each city and hamlet has its elders who control its municipal affairs. The civil governor is the final civil authority in the Province. The military governor controls the military forces of the Province independently of the civil governor and outranks the latter. The commissioner of foreign affairs at each treaty port is the intermediary through whom the consuls usually conduct business affairs. All the above-named officials are appointed by the central government at Peking.

The seat of the Kiangsu provincial government is at Nanking. In Anhwei the civil governor's yamen is at Anking, the provincial capital, while the military governor's headquarters are at Pengpu, on the Tientsin-Pukow Railway. Nanking has repeatedly been the capital of China; the first time was about 317 A. D. and the last was when Dr. Sun Yat Sen established the republican government at Nanking in 1912.

EDUCATION.

Nanking is one of the educational centers of China. There still remain about 20,000 examination stalls in a fair state of preservation in the South City. In the old days, aspirants for distinction and office here wrote their competitive essays on the classics. This educational régime was transformed into the modern system mentioned below. The stalls are now idle, falling into decay, and are useful only as an attraction to tourists as a relic of a fascinating past. This past is still feebly represented by the numerous private schools scattered throughout the city and Province.

According to Dr. E. A. Ross, not one man in ten can read, and not one woman in a thousand. This is an estimate for all China. The China Mission Yearbook says that 70 per cent of the native Christians are unable to read. Other missionary illiteracy estimates place the percentage at 85.

NATIVE SCHOOLS.

Beginning in 1914, Kiangsu inaugurated a provincial school system that partakes very strongly of the character of modern education. The principal impediment is lack of qualified teachers. This is being remedied by the establishment of normal schools under the supervision of men and women who have received their education abroad. The leading institution of this kind in this part of China is the Government Teachers' College, under the able direction of Dr. P. W. Kuo, who is a returned student from the United States. This college is located at Nanking, and usually has two or three foreigners on the faculty. Another Chinese college of importance and influence at Nanking is the Conservancy College, whose dean is Mr. S. T. Hsu, also a returned student from the United States.

The following educational statistics were published in Kiangsu for 1915: Boys' schools, 5,238, with 205,080 students and 6,538 teachers; girls' schools, 255, with 31,988 students and 635 teachers. These schools included a medical school, 7 normal schools for boys, 2 normal schools for girls, 9 middle schools, 2 law schools, and a sericultural school. The two larger institutions mentioned in the preceding paragraph are not included in the statistics just given. In addition to the above, the Government Naval College, which was established at Nanking by the former Manchu régime, is also in operation under exclusively Chinese supervision.

FOREIGN SCHOOLS (SECULAR).

There is one foreign secular school in this district—the Nanking Foreign School. This school originated from the desire of a few

American families in Nanking to keep their children at home until ready for college. It began in 1911 in the home of one of the mothers as a mothers' school, three families uniting in it. The experiment soon outgrew its quarters, and the "little red schoolhouse on the hill," now known as "Hillcrest," was completed in 1914 on a beautiful site donated by one of the mothers, now deceased.

This school follows the Ithaca, N. Y., public-school curriculum. The 2 employed teachers are assisted by about 10 of the mothers, alternating in the various grades from primary to high school. The average attendance is about 50, including a number of children of British parentage. The children who have returned to the United States from this school have invariably been better prepared for their advanced work than were their new classmates in America. The tuition is from $3 Mex. to $10 Mex. per month, together with an annual assessment of $15 Mex. for each family having children in the school. The school property is worth about $3,000 gold.

FOREIGN SCHOOLS (MISSIONARY).

Nanking is also the center of American missionary activity. Missionary education in Kiangsu has been the principal factor in causing the change from the ancient to the modern educational system.

The University of Nanking, a union missionary institution, is one of the leading missionary educational institutions in China. Its campus comprises about 80 acres inside the walled city. It now owns 7 modern buildings devoted to classrooms and laboratories, 3 dormitories, a chapel, a hospital with modern operating pavilion attached, and 17 residences for the foreign faculty and 8 for part of the Chinese faculty. It has all the elements of an up-to-date institution. It has more than 500 students and more than 70 instructors, 28 of whom are Americans.

The university has the following departments (the figures indicating the 1915 registration): College, 42; medical, 38; normal training, 84; agriculture and forestry, agriculture with 13 students and forestry with 45; missionary training, 51; high school, 140; middle school, 131; total, 544.

In 1915, the Chinese Government made a grant of money to aid in the development of the department of agriculture and forestry of this institution, and transferred its forestry students from Peking to the University of Nanking. The governors of Anhwei, Shantung, Kweichow, and Kiangsu have sent scholarship students to this department, and the governor of Kiangsi has made a grant of money to it. The Forest Fund Committee of Shanghai has also transferred its students from the former German school at Tsingtau to Nanking and has established three scholarships in this department of the University of Nanking.

There are 23 lower missionary schools in the city, enrolling about 1,000, which are "feeders" to the university. In addition to these, there are several mission schools for girls, orphanages, and a hospital in the city.

Aside from the mission educational work in Nanking, there are the following mission schools, in 19 centers in this consular district, following the American graded system:

Character of schools.	Number of schools.		1915 enrollment.	
	Boys.	Girls.	Boys.	Girls.
Primary	67	19	1,438	574
Intermediate	10	4	436	130
Grammar	21	7	539	99
High	30	9	739	247
Industrial	1	....	98	....

There is a total of 167 mission schools of all grades enrolling 2,900 pupils, under 276 Chinese teachers. These schools are under the direct supervision of 41 American missionary teachers, many of whom are professionally trained teachers and all of whom are college graduates.

HOSPITALS.

There are 16 American missionary hospitals in the Nanking consular district, located as follows: In Anhwei—Anking, Chuchow, Hwaiyuan, Luchowfu, and Wuhu. In Kiangsu—Chinkiang, Haichow, Hsuchowfu, Luho, Nanking (3), Sutsien, Tsingkiangpu, Tungchow, and Yangchow. They are all conducted by qualified medical practitioners. The Foreign Memorial Hospital at Nanking receives foreign patients. All the others are for Chinese only.

In addition, there is a Japanese modern hospital at Nanking, a China Inland Mission hospital at Chinkiang, and a native modern hospital at Chinkiang. It is estimated that the average number of cases annually treated by each of these hospitals is 1,100. There are varying degrees of modern equipment. The University Hospital at Nanking is cooperating with the Rockefeller China Medical Board and is becoming a model institution of efficiency.

USE OF MODERN SCHOOL AND HOSPITAL SUPPLIES.

The use of modern school supplies in the lower grades is almost entirely restricted to textbooks that are translations of standard American texts. The higher institutions, missionary and Chinese, are limited only by available funds. Generally speaking, the work done is said to be equal to corresponding work in the United States.

The field of the 16 modern hospitals is a population of 57,000,000.

The installation of foreign school and hospital supplies in this district is dependent, to a marked extent, upon the use of the English language in the work, as well as upon the available funds. The mission schools have been the pioneers while the Chinese institutions of higher education are adopting English texts only where it is impossible to secure a text on the subject in Chinese. Many of the texts in the lower grades have been translated into Chinese, and, as good translations of the higher texts appear, English textbooks will be correspondingly restricted in use.

AGRICULTURE.

The principal occupation of the people of this district is farming. In northern Kiangsu and Anhwei wheat, rye, millet, corn, rice, groundnuts, beans, and sweet potatoes are grown, ranking in importance in the order given; while in the south and along the

Yangtze River rice, wheat, groundnuts, hemp, cotton, and corn are the crops produced. The planting and harvesting season are shown in the following statement:

March to May.—During this period the crops sown include corn, kaoliang, yellow and other beans, peanuts, sesame, cotton, millet, rice, tobacco, radishes, cucumbers, melons, carrots, pumpkins, snap beans, turnips, gourds, cinnamon vine (tubers several feet long), lettuce, celery, and edible lily. The crops harvested during this period include barley, early wheat, garlic, onions, leeks, lettuce, and celery.

June to August.—The crops sown include sweet potatoes, late corn, buckwheat, and cabbage (Chinese). Those harvested include wheat, kaoliang, corn, peas, white beans, snap beans, millet, lily bloom, melons, cucumbers, gourds, lily roots, and pumpkins.

September to November.—The crops sown include wheat, white beans, peas, barley, early wheat, onions, leeks, garlic, and spinach. Those harvested include sesame, sweet potatoes, peanuts, beans, cotton, buckwheat, rice, pumpkins, carrots, turnips, tobacco, cinnamon tubers, and lettuce stalks.

Winter.—The crops harvested include cabbage and garden greens.

The agricultural department of the University of Nanking is developing experiments, which are already bearing fruit, in improved seed selection, time of planting, cultivation, rotation of crops, etc.

The most primitive implements are in general use. Modern implements and methods must await the time when the farmers' buying capacity has increased.

The plow in use is light, like a large ''single-shovel'' plow. The harrow consists of two light parallel pieces of wood with thin spikes. The drill for wheat has three boots, with no fertilizer box; and that for corn has two boots, with no fertilizer box. A good stone roller is used. The spade, pick, and hoe are clumsy, but cheap and effective for their purpose. Animals are used for farming purposes as follows: Oxen and water buffalos, 80 per cent; ponies and mules, 5 per cent; donkeys, 15 per cent. Human and animal manure, ashes, bean cake, and sediment from rivers, lakes, and ponds are used as fertilizers. The fertilizer is usually dried, pulverized, and dropped in the hill, or tossed with a shovel over the wheat and kaoliang fields.

Comparatively little money is loaned on crops. The harvest is immediately marketed to supply local demands, or it is bought up by representatives of merchants or speculators on the fields, who pay for it in notes issued by the purchaser on the strength of his assets or his reputation. The crops are carried to the waterways and railways on barrows, donkeys, and carts.

MINERALS AND MINING.

In May, 1911, the Industrial Taotai of Nanking organized a mining and mineral department under the supervision of an American engineer. Plans were made to equip a complete laboratory suitable for analysis and metallurgical tests of the ores in this section of China. Before anything was accomplished, the revolution overthrew the Government and nothing has since been done.

No Government mineral explorations have been made in this district. The Chinese have opened two mines of an inferior grade of coal. One is at Lungtan on the Shanghai-Nanking Railway between Nanking and Chinkiang; the other is near Chuchow, Anhwei, about 30 miles north of Pukow on the Tientsin-Pukow Railway. There are other coal and iron deposits in this vicinity that are untouched.

One of the important features of the industrial progress in the district is the development of iron-ore mines at places on the Yangtze River. Japanese companies are the operators; light railways have been constructed, and also very large wharves. The ore is all shipped to Japan. The places are accessible at all times of the year to large ships. One mine is about 30 miles above Wuhu, and the other at Tsaishiki, about 15 miles from Wuhu. This company is reported to have mined 80,000 tons of ore. In this connection it is interesting to note that a Japanese company transported 85,390 tons of iron ore from the Tayeh mines near Hankow to its depot at Wuhu for eventual shipment to the Yawata Ironworks at Moji, Japan. The iron ore is stored at Wuhu, as the larger ships are not always able to call at Hankow because of low water.

Bowlders of a high-grade hematite project from a spur of Purple Mountain east of Nanking, and strata of bog ore appear in close proximity. These deposits are on Government land, and no serious attempt has been made to develop them. The bowlders of hematite, however, are gradually being chipped away and carried to the arsenal.

The administration of mines is under the control of the civil governor, who acts solely as the representative of the central Government in these matters. The attitude of officials toward foreign investments varies with the officials. The general tendency, however, is to favor them. In none of the above-named mines is foreign machinery or method in vogue. The coal mined is not sufficient for local consumption, and is of too poor a grade for house-use.

WATERWAYS.

Before the completion of the Tientsin-Pukow Railway in 1912, this district was entirely dependent upon the Yangtze and Hwai Rivers and the Grand Canal, with their tributaries, for interior transportation facilities. (See "Physical features" for decription of these waterways.)

With the exception of the Hwai and Yangtze Rivers, these waterways are most uncertain, as they are subject to floods and to drouth. High water in the canals in summer prevents traffic, because the displacement of the junks causes an overflow into the adjoining fields. Low water in winter stops traffic until there is sufficient flow to navigate. (See "Treaty ports, Chinkiang.") It is estimated that there are about 2,000 miles of waterways in this district.

Steamers ply on the Yangtze, as well as numerous lines of launches, which also navigate the canals and the Hwai River and smaller streams. The major portion of the water traffic on the canals and streams, other than the Yangtze River, is carried on by junks varying in size from a few hundred pounds capacity to 200 tons. The small steam launches are used very extensively as passenger carriers, as well as for towing junks. The junk traffic is almost entirely under the jurisdiction of the Native Customs, and the dues derived from it at the port of Wuhu (the only port giving statistics) are almost double those of the Maritime Customs. The goods transported inland and outward to and from five important places are shown in the following statement:

Chihchowfu.—Goods sent to this place from Wuhu include cotton piece goods, kerosene, paper, and sugar. Articles received from it at Wuhu include beans, rice, wheat, charcoal, coal, garlic, ginger, incense powder, silk cocoons, vegetable tallow, and tea.

Hochow.—Goods sent to this place include cotton piece goods, cigarettes, kerosene, wood oil, paper, sugar, and tobacco leaf. Articles received from it include beans, rice, wheat, cotton, groundnuts, and sesame oil.

Luchowfu.—Goods sent to this place include cotton piece goods, cigarettes, coal, iron, gypsum, ironware, kerosene, wood oil, and sugar. Articles received from it include beans, rice, wheat, white alum, fresh eggs, feathers, hides, groundnuts, indigo, and vermicelli.

Ningkwofu.—Goods sent to this place include cotton piece goods, cigarettes, chinaware, cotton yarn, indigo, iron, kerosene, paper, soda, sugar, and tobacco leaf. Articles received from it include beans, rice, wheat, paper, silk cocoons, and tea.

Taipingfu.—Goods sent to this place include cotton piece goods, cigarettes, indigo, iron, paper, sugar, kerosene, and tobacco leaf. Articles received from it include beans, coal, rice, and wheat.

The great Ningkwofu tea district in southwestern Anhwei is reached from Wuhu by canal, but much of the produce from this district finds its outlets to the markets through Poyang Lake and the Yangtze River to Kiukiang in Kiangsi and to Hankow in Hupeh, and via the Kiang to Hangchow in Chekiang. The same is true in the case of the silk industry of southwestern Anhwei.

The following trade centers on these inland water routes are of local importance in this district:[1]

Pengpu, the present seat of the provincial military government, is located on the Hwai River at the Tientsin-Pukow Railway bridge, 109 miles north of Nanking. Under the prestige of the military governor, it is fast becoming an important inland trading center for beans, wheat, other farm products, eggs, etc. Several foreign firms there occupy spacious godowns, and it is the only place in the interior of the district in which foreign merchants are permitted to reside.

Chengyangkwan, 30 miles up the Hwai River from Pengpu, is a favorite distributing center for the surrounding territory on both sides of the river. If lies within the rich agricultural region of northern Anhwei, collecting native produce and distributing foreign products, practically all of which pass through Pengpu.

Liuanchow, 67 miles southwest of Chenyangkwan, is on a small tributary of the Hwai River. It sends out a stream of farm products and distributes a considerable amount of foreign imports. It is on the railway that is projected between Pukow and Sinyang on the Peking-Hankow Railway, and is in the center of the rice section. Rice is the principal export from Wuhu, which port is located about 200 miles to the southeast, on the Yantze River.

Luchowfu is another equally important distributing center in the Chao Lake region. It is 60 miles east of Liuanchow, and is most easily reached from Wuhu.

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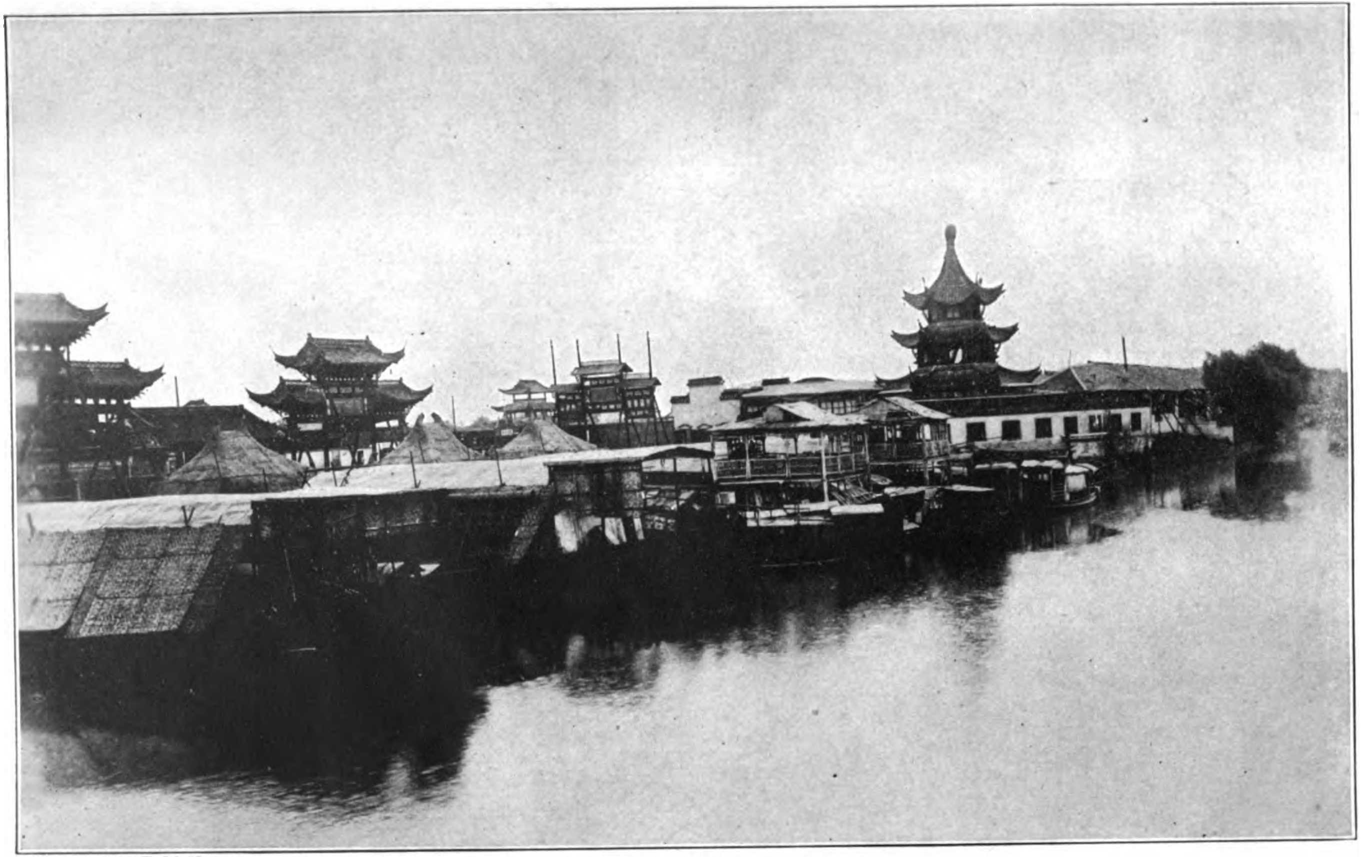
[1] It has been impossible to obtain definite information regarding any of the important inland centers, and the list given should be regarded merely as a very incomplete index.



Photograph by E. M. Newman.

FIG. 45.—RIVER FRONT, NANKING.

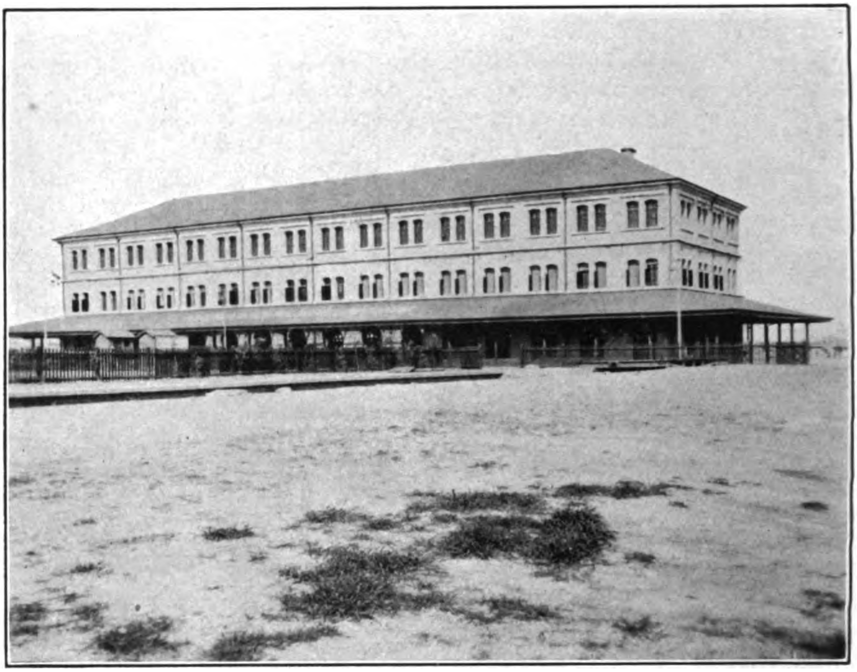


FIG. 46.—TIENTSIN-PUKOW RAILWAY TERMINAL STATION, PUKOW.

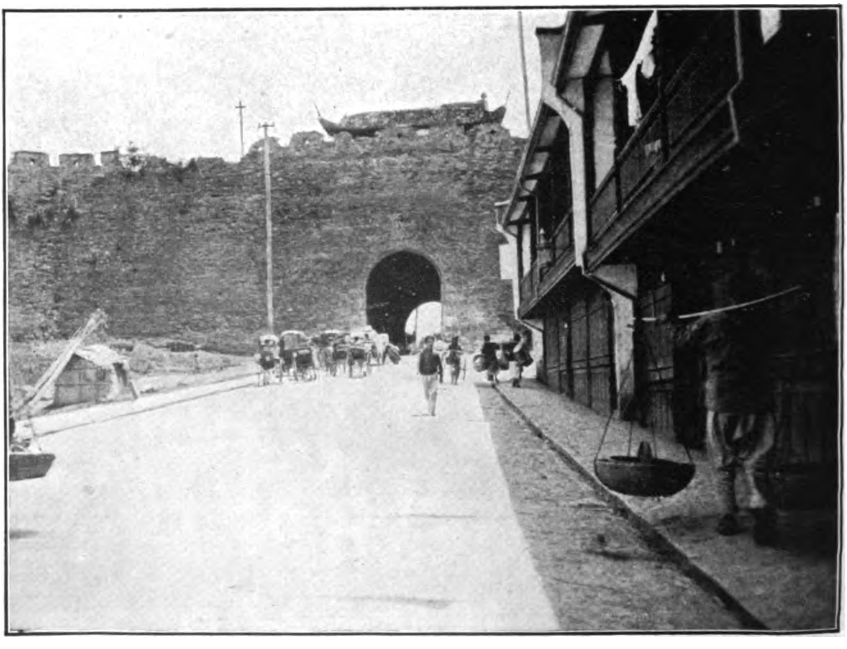


FIG. 47.—GATE AFFORDING ENTRANCE TO WALLED CITY OF NANKING FROM HSIAKWAN.

Other trading centers in Anhwei north of the Yangtze River are Sheochow, Tsungyangchen, Sanho, Shucheng, Yingchowfu, Tingyuan, Taihu, Yuntsao, Wuweichow, Hwaiyuan, Hochow, and Chaohsien.

Trading centers in Anhwei Province south of the Yangtze River include Wanchih, Ningkwofu, Hweichow, Nanlinghsien, Tunki, Suining, Ihsien, Kimen, Wuyuan, and Chichowfu.

Those in Kiangsu Province north of the Yangtze River include Luho, Yangchow, Taichow, Kaoyu, Hwangkiao, Siennumiao, Fanchwan, Hinghwa, Tungtaihsien, Paoying, Hwaianfu, Tsingkiangpu, Suchien, Yaowan, Haichow, Yencheng, and Jukao.

Those in Kiangsu south of the Yangtze River include Kaoshun and Liyanghsien.

In addition to foreign goods, which find their way into the interior through these distributing centers, substantial imports of Chinese manufactures, foreign style, from factories at Shanghai, are absorbed. Among the most prominent are candles, matches, and soap. The Chinese products from Kiangsu which enter into the export trade from the above-named centers are sesame oil, eggs, chickens, cattle, pigs, and lard. The last five articles usually reach the foreign market through the International Export Co. at Nanking.

There are no established rates for transportation on these inland waterways. Each line charges what the traffic will stand at the time. This is also true of the Yangtze River steamers. Each line, however, has its freight schedule, which is subject to change in competition with its rivals.

RAILWAYS.

The railways in operation in the Nanking consular district are the Shanghai-Nanking Railway, 193 miles long; the Tientsin-Pukow Railway, 233 miles long (in this district; full length, 626 miles); and the Lung-Hai Railway, about 50 miles in this district, which connects the Peking-Hankow line at Chengchow, Honan, with Hsuchowfu on the Tientsin-Pukow Railway in Kiangsu.

The first two lines named were constructed by means of British loans. British engineers and managers have general supervision over them until the loans are repaid. The construction materials and rolling stock are largely of British manufacture. A small percentage of American railway timbers were used in the construction of the Tientsin-Pukow line, and this line also has a number of American engines and hand cars. The Lung-Hai line is said to have been financed by Belgians.

There is no railway construction in progress in this district at the present time. The Lung-Hai line is surveyed to its seaboard terminus, Haichow, and the Changsha-Nanking line has completed the survey. As these lines are dependent upon foreign loans, it is probable that construction will begin on them as soon as funds are available. The latter line, the Ning-Siang Railway, will be more than 600 miles long and will connect Nanking with Changsha in Hunan, passing through the tea and silk districts of Ningkwofu and Hweichow, respectively, on past the famous potteries at Kingtehchen in Kiangsi, and through Nanchang, the capital of the same Province. This line taps the heart of China's present developed mineral wealth.

The roadbed for the Pu-Sin Railway from Wuhu, about 30 miles from Nanking, to Sinyangchow is completed, and buildings for stations have been erected, but no rails have been laid.

ABSENCE OF TRAMWAYS AND ROADS.

There are no tramways in this district. Nanking has a standard-gauge steam railway leading from the river front to a point within the walled city about 7½ miles away. It makes connections for passengers and freight with the Shanghai-Nanking Railway.

A contract for a city tramway at Nanking was let to a German firm in the spring of 1914. The survey was completed, and an entrance from Hsiakwan through the city wall into the city was made the same year, but the opening of the war stopped operations.

There are no real roads in this district. There are footpaths, and what were good roads during the Ming Dynasty 600 years ago but are now, for the most part, impassable for vehicles of any kind. Heavy transportation is confined to waterways and railways.

POSTAL FACILITIES.

The Chinese Post Office, under the supervision of foreigners, is very extensively organized and efficiently managed throughout this district. Every village of importance has a money-order and domestic parcel-post office and regular mail deliveries. Foreign parcels may be mailed at the treaty ports of Chinkiang, Nanking, and Wuhu. The routing of the mails is facilitated by the waterways and railways.

British and Japanese post offices are located at Nanking.

As the Chinese Post Office is not in the Postal Union, it can not issue money orders for foreign countries. Americans in the district, therefore, must make use of the Shanghai facilities, or of the foreign facilities at Nanking.

A reply from New York should be received in Nanking within three months, under normal conditions.

TELEGRAPHS.

The telegraph service is a Chinese Government monopoly and can not be said to be efficient, though it is fairly reliable. The fundamental weakness seems to be in its delivery service. Telegrams can be sent from the ports to any part of the world, via the cables at Shanghai, at established rates. The domestic rate for messages in a foreign language is 9 cents Mex.[1] per word for any destination in the same Province, and 18 cents Mex. per word for destinations outside of the same Province. Messages in the Chinese language are sent for 6 and 12 cents, respectively. The rate to Washington, D. C., is $1.65 Mex. per word. In all cases, the address is charged for.

All telegraph supplies are purchased by the buying agents in Shanghai or Peking.

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[1] See footnote on p. 54.

TELEPHONES.

The telephone system in Nanking is a Government institution and gives rather unsatisfactory service. The rates provide for a deposit of $20 Mex. upon installation and a charge of $5 Mex. per month to subscribers. The system connects Hsiakwan with the walled city. The subscribers are as follows: Government offices, 135; foreign firms, 14; Chinese firms, 22; others, 215. It is the common battery system. The materials are purchased wherever possible. An efficient organization could treble the subscription list.

Complete specifications were drawn up in 1917 for a very modern telephone system, but early in 1918 bids had not yet been invited.

NEWSPAPERS.

There are no widely circulated newspapers published in the Nanking district. The Sin Wan Pao and the Shun Pao (Chinese), and the leading foreign newspapers in Shanghai—the China Press, the Shanghai Gazette, the Shanghai Mercury, the Shanghai Times, and the North China Daily News—are widely read in this district, and are depended upon for political and trade news.

PUBLIC WORKS AND SANITATION.

There are no modern irrigation methods in vogue in this district. The ancient Chinese system of water-wheels propelled by human power is quite general.

The Hwai River Conservancy, under the general direction of the American Red Cross, is still in its preliminary stages. The objects are (1) to provide an outlet to the sea for the overflow of the Hwai River so as to reclaim the rich lowlands which are annually submerged at high water, and (2) to dredge the Grand Canal so as to make it a navigable waterway. The surveys have not been completed.

Generally speaking, no modern sanitary methods are used outside the treaty ports. The same is true regarding municipal administration, waterworks, fire protection, street lighting, and street improvements. Pengpu, above noted, and Yangchow (the distributing center for the Government salt monopoly) are exceptions. These two places have electric lights and the streets are wider and better kept than in the average Chinese city. A general improvement along these lines must await the future generations.

PUBLIC-SERVICE COMPANIES.

The electric light companies at Nanking, Pengpu, and Anking are Government concerns; at Yangchow, Wuhu, and Chinkiang the plants are privately owned. All are 50 cycle, alternating current, using British and German machinery. The plant at Nanking has also installed some American machinery. The local rate is 17 cents Mex. per kilowatt. The Nanking plant is entirely inadequate to supply the demand, and the management does not appear able to meet requirements.

A waterworks system for Nanking has been seriously discussed several times, but nothing has as yet been determined upon or undertaken.

TREATY PORTS AND FOREIGN CONCESSIONS.

CHINKIANG.

Chinkiang, in Kiangsu Province, is located on the Shanghai-Nanking Railway at the confluence of the Grand Canal and the Yangtze River. It is 45 miles east of Nanking and 156 miles up-river from Shanghai. Before the opening of the Tientsin-Pukow Railway, it was an important distributing center, but is now declining on account of the shifting of trade to the railway, which makes connections at Nanking for Shanghai. It is not believed, however, that it will decline to a negligible factor in trade, because of the projected conservancy of the Hwai River and the improvement of the Grand Canal above mentioned. It has a Chinese population of about 128,000. The harbor limits are between a line due north from Consular Bluff on the east and another line due north from Golden Island Pagoda on the west. Foreign business houses and residences are restricted to the British Concession on the river front outside of the walled city. The concession is governed by a municipal council of five chosen by resident foreigners, each of whom must own property valued at not less than 500 taels (about $500 gold), and subject to the approval of the resident British consular officer in charge at Chinkiang, who is usually chairman of the council.

NANKING.

Nanking, in Kiangsu Province, has a population of about 368,000, and is the seat of the provincial government. It is located on the Yangtze River, 201 miles by river and 193 miles by rail inland from Shanghai. It is the junction of the Shanghai-Nanking and the Tientsin-Pukow Railway. The commercial settlement, where foreign firms are largely located, is at Hsiakwan on the river front, outside the north gate of the walled city of Nanking. The harbor is the full width of the Yangtze River between the mouth of the Nanking "Cut-Off" at Theodolite Point (the lower limit) and the lower mouth of the Ta Sheng Kwan "Cut-Off" (the upper limit). The harbor is about three-fifths of a nautical mile wide and over 2½ nautical miles long. It is the only port in the district having wharves for ocean steamers accessible the year round. It is the only port between Shanghai and Hankow at which facilities are provided for ocean-going vessels.

Hsiakwan is the section of the port just outside the north gate of the walled city which has been set apart by the authorities for foreign business houses. It is on the river front and conveniently located for traffic. This district is under the joint police control of the Chinese authorities and the consuls. The administration of affairs is very largely left in the hands of the commissioner of customs, who renders a semiannual statement of the receipts and expenditures—the wharfage dues being adequate for present needs.

Foreigners may reside and conduct business within the walled city if they so desire.

The consulates at present in Nanking are American, British, and Japanese. The British Government owns its consular premises.

WUHU.

Wuhu, in Anhwei Province, has a population of about 100,000. It is situated 55 miles up-river from Nanking, or 256 miles from Shanghai. Foreign business houses are located in the foreign settlement, which is under the control of the local officials. It is on the river front, and, as in the other treaty ports, shows better streets than the Chinese walled city. The harbor extends from the Pagoda to Ichishan Bluff.

The new customhouse at Wuhu, on the edge of the foreign settlement, was occupied in June, 1919.

A large cotton mill has been completed just back of the foreign settlement. The Japanese at Wuhu have a large plant where iron ore from small up-river boats is dumped, to be transferred later to ocean steamers.

This port has access to undeveloped coal mines, and ranks first in China in the exportation of rice. It is probable that it will also be connected with the Nanking-Changsha Railway (see "Railways").

There is a British consulate at Wuhu.

FINANCE AND BANKING.

There are 10 silver dollars, with their respective subsidiary coins, current in Nanking. Eight of these have their periods of fluctuation. The dollar issued by the late Manchu régime and the Yuan, issued by the late President Yuan Shih Kai, were made current throughout China by mandates. They were, respectively, intended to be used as the standard for a revised currency system; but political events thwarted their purpose. Copper 1 and 2 cent pieces and $\frac{1}{10}$-cent (brass) cash are also used in small transactions. One dollar is usually worth 11 dimes and from 2 to 7 copper cents and a few brass cash—depending upon exchange. It is necessary, therefore, in all transactions to have an understanding as to whether the deal is in "small money" (11 dimes, plus, to the dollar) or in "big money" (10 dimes to the dollar). A great many counterfeit coins are in circulation, and many have lost, and are losing, value through "sweating." It is necessary to "shroff" every coin received. In addition to the coins, there are numerous notes in circulation, issued by the various foreign and native banks in Shanghai. These are circulated at par and are used very extensively. Great care must be taken to ascertain that these notes have not been issued in Peking, Hankow, Canton, etc., as such issues are discounted at Nanking.

All foreign transactions are at present negotiated through the Shanghai banks, as there are no established connections at Nanking. Checks on Shanghai are, however, subject to a very small discount unless cashed by a local concern desiring to remit to Shanghai.

The Shanghai account is kept either in Shanghai (Tsaoping) taels or in dollars. For exchange reasons, most of the older banks (foreign) give preferential rates to the tael account. Some of the new banks make no distinction. The tael is not a coin, but a varying unit of value of 1 ounce (one-sixteenth of a pound) of silver. It is not the same in any two Provinces, and is seldom the same in two adjoining trade centers.

The Director of the Mint at Washington, D. C., gives quarterly values for 16 different taels and four different dollars in China. The tael values (except that of the Haikwan tael) apply to specific ports only, while the dollar values apply to all China.

It would seem therefore, that the dollar should be preferred because of its general use. This advantage is more than counterbalanced, however, by the fact that the banks will not convert gold into dollars except through taels. For example, $1,000 gold equals 999 taels equals $1,320 Mex., the rates of both taels and Chinese dollars being variable quantities.

There are no foreign banks in this district.

Chinese banks are numerous, and are engaged in exchange, in advancing funds to merchants on approved security at 1 to 2 per cent per month, and in transmitting credits to near-by places.

The average Chinese merchant in this district seldom deposits his money. It is kept in his own possession. The Chinese banks are, therefore, owned by individuals of wealth. A merchant who is not a member of the local chamber of commerce would find it very difficult to secure a loan at a bank. Some of the Chinese banking corporations of Shanghai operate in this district. They negotiate both foreign and domestic paper, and greatly assist in the movement of produce and goods. These banks offer equal facilities for tael and dollar transactions and accounts, and thus more readily lend themselves to the development of trade than do the foreign banks; but they also have the double exchange system of converting gold into Mexican or other dollars.

MANUFACTURING AND OTHER INDUSTRIES.

Agriculture and salt evaporation are the two industries native to this district. The principal crops are rice, beans, wheat, groundnuts, corn, sesame, and cotton. The production of the rice fields of southern Anhwei and of the salt-pans of eastern Kiangsu is entirely under Chinese supervision. The acreage of rice is uncertain, but the yield is the largest for any one section in China.

NATIVE INDUSTRIES.

The flour mills in the district equipped with modern machinery are located at Haichow, Tsingkiangpu, Yangchow, Chinkiang, Wuhu, and Taichow; the bean mills are at Chinkiang, Nanking, and Wuhu; the cotton mills are at Chinkiang and Tungchow; and the rice mills are at Wuhu and Nanking. The products of these mills, with the exception of the bean-oil mill at Chinkiang, do not leave China. They are all under Chinese management and supervision.

The field is capable of considerable expansion in the number of these mills, which are totally inadequate to supply the export demand under normal conditions. The cotton and flour mills are successfully competing with the foreign products on the local markets.

There are numerous egg-drying plants along the Grand Canal, the Tientsin-Pukow Railway, the Yangtze and the Hwai Rivers—several of which are equipped with foreign apparatus. During the past decade this industry has risen from nothing to a very noticeable place in the export trade of the district. Several of these inland factories are probably owned by Shanghai foreign firms which engage local Chinese to operate them. Many of them are known, however, to be purely Chinese enterprises. This industry is also capable of considerable expansion.

The silk industry, though generations old, is in a backward state. Its possibilities are not apparent to the present generation of manufacturers, who stolidly plod along with their crude, primitive, indifferent methods of raising diseased cocoons along with healthy ones and make no effective attempt to improve their mulberry-leaf supply for the silkworms.

The click of the looms is so general in Nanking that it has been said that every home is either a silk or a cotton factory. The hand manufactures range from the cotton yarn belt to the once famed gold tapestry with which the palaces of emperors were decorated. These workers have not learned the value of combination; hence modern methods are yet to be introduced.

There are modern cotton mills at Tungchow, and a steam filature at Chinkiang. The cotton mills are owned by the Chinese merchant prince, Chang Chien, and are proving a profitable venture for the owner as well as advantageous for the Chinese cotton market.

The extension of the cotton-manufacturing industry will depend upon the answer to the question as to whether China, or this section of China, is to produce sufficient raw cotton to supply the local demand for cotton goods and yarn. If this section can produce the raw cotton, the mills, like the flour mills, will drive foreign products from the market and will send their products abroad.

The development of cotton manufacturing in general, therefore, appears merely to be waiting for the proper stimulus, namely, organization on a sufficient scale. The same is true of the silk industry.

FOREIGN INDUSTRIES.

There is only one foreign manufacturing establishment in this district—the International Export Co. (Ltd.), a British corporation located at Nanking.

This company has an extensive factory on the river front adjoining the Shanghai-Nanking Railway dock. It markets desiccated and frozen eggs, frozen game and poultry, meat, beans, sesame seed, hides, lard, feathers, etc. The annual output at Nanking is valued at several million dollars. The concern ships most of its products to England and the Allies. This is the only factory on the Yangtze River that ships frozen products abroad. The eggs are obtained from Kiangsu, Honan, Anhwei, and Shantung. Most of the cattle and hogs come from Honan, Kiangsi, and Shantung.

An American oil company has leased for 10 years a frontage at Pukow where oil will be discharged directly from ocean tank steamers.

SUMMARY.

The lines along which trade can be developed most readily are:

First, the organization of the vegetable-oil, silk, cotton, and mining industries, with the installation of modern methods of securing the raw products and of manufacturing the finished products for export.

Second, with normal freight rates, the working up of a stable trade in American piece goods, groceries, and metals, including machinery, etc.

COMMERCE OF THE PORTS: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Wuhu, Nanking, and Chinkiang, the three treaty ports in the Nanking consular district, during the years 1904, 1913, and 1917; the figures for the three ports have been combined in the single table:

Imports and exports.	1904	1913	1917
Imports of foreign goods:			
From foreign countries and Hongkong	$3,064,453	$5,371,967	$8,389,791
From Chinese ports	17,819,992	12,044,656	23,552,433
Total foreign imports	20,884,445	17,416,623	31,942,224
Reexports of foreign goods:			
To foreign countries and Hongkong			
To Chinese ports	134,021	528,951	1,968,275
Total foreign reexports	134,021	528,951	1,968,275
Net total foreign imports	20,750,424	16,887,672	29,973,949
Imports of Chinese products	6,678,650	8,253,626	16,909,290
Reexports of Chinese products:			
To foreign countries and Hongkong	11,655	133,156	1,305,036
To Chinese ports	87.823	223,993	267,777
Total Chinese reexports	99,478	357,149	1,572,813
Net total Chinese imports	6,579,173	7,896,477	15,336,477
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	1,464,327	285,764	2,992,260
To Chinese ports	16,138,175	17,727,566	16,881,997
Total exports of local origin	17,602,502	18,013,330	19,874,257
Gross value of the trade of the ports	45,165,598	43,683,579	68,725,771
Net value of the trade of the ports	44,932,099	42,797,479	65,184,683

EXPORT TRADE.

The following table shows the principal exports of native products from the Nanking consular district (ports of Wuhu, Nanking, and Chinkiang) during the years 1904, 1913, and 1917:

Articles.		1904	1913	1917	
		Quantity.	Quantity.	Quantity.	Value.
Beans	tons	28,854	67,211	5.147	$305,367
Bean cake	do		31,705	1,261	35,940
Eggs:					
Albumen and yolk	do		889	365	177,202
Fresh	number	2,034,000	4,488,100	(a)	(a)
Preserved	tons	25	91	(a)	(a)
	number		2,461,000	(a)	(a)
Flour	tons	621	9,521	11,839	968,264
Feathers	do	1,724	1,661	1,255	304,794
Groundnuts in shell and kernels	do	83,477	14,694	75,684	498,152
Hemp	do	283	631	541	101,671
Hides, cow and buffalo	do	485	344	534	368,824
Nankeens	pieces		23,459	(b) 6	5,710
Oil:					
Bean	tons		4	(c)	(c)
Groundnut	do	5,110	234	647	146,674
Rapeseed	do		78	(c)	(c)
Sesame	do	569	379	325	79.945
Wood	do			(c)	(c)

a Fresh and preserved eggs, 6,636,608 (number of eggs), valued at $64,977.
b Tons.
c Comparable figures are not available for 1917.

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
Rice..........tons..	334,597	147,252	100,272	$4,763,990
Seeds:				
Rape..........do....	1,847	3,081	9,064	668.596
Sesame..........do....	5,119	2,180	2,884	297,918
Seed cake..........do....	1,178	2,611	3,670	103,526
Silk:				
Raw white..........do....	121	88	71	731,887
Piece goods..........do....	250	160	217	2,926,166
Skins, goat..........number..	1,196,787	61,106	173,512	104,689
Tallow, animal..........tons..	....	430	38	10,979
Wheat..........do....	6,077	2,799	6,793	332,787

The declared-export return of the Nanking consulate represents only a very small portion of the shipments from the Nanking consular district to the United States, because most of them are included in the Shanghai statement. In 1918 the only item was one covering two shipments of curios (chinaware), valued at $2,464. In 1917 the items were as follows: Curios, $6,106; eggs, frozen, in tins, 1,227,136 pounds, valued at $101,169; eggs, whole, 24,000 dozen, valued at $3,218; hides, ox, 1,262,524 pounds, valued at $387,009; all other articles, $306; total value, $497,808.

The best season for collecting eggs is from February to May; for marketing game and live stock, from September to March; and for harvesting beans, sesame seed, etc., from August to November.

A general direct export trade from this district to foreign countries must await the advent of commission houses, shipping communications, etc.

Manufactures capable of being exported from Nanking in commercial quantities include brassware, wood carvings, wickerware, bird cages, gold tapestry, silk brocade, and porcelain.

Upon the payment of one-half the export duty at interior places of origin, a transit pass (see "Import trade") will be issued exempting such exports from all other taxation en route to port of exportation.

IMPORT TRADE.

The following table shows the principal net imports of foreign goods at Wuhu, Nanking, and Chinkiang, the three treaty ports in the Nanking consular district, during the years 1904, 1913, and 1918:

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
Bags, all kinds..........number..	5,246,630	3,628,494	1,809,585	$257,992
Bêche de mer..........tons..	184	102	109	79,749
Cambrics, lawns, and muslins..........pieces..	....	20,095	12,507	60,416
Candles..........tons..	....	689	1,881	160,525
Cement..........do....	....	1,204	....	....
Chintzes and plain cotton prints..........pieces..	80,207	23,887	32,413	112,396
Cigarettes..........thousands..	....	612,291	753,924	3,289,931
Cigarettes..........value..	$63,582	....	....	....
Copper..........tons..	2,698	3,302	25	24,353
Cotton flannel..........pieces..	7,923	2,751	23,858	100,657
Cotton italians, venetians, crêpe, and lastings....do....	252,531	203,524	155,263	988,920
Cotton yarn..........tons..	10,645	4,522	14,020	7,171,963
Drills..........pieces..	126,354	41,752	49,249	234,704
Dyes..........value..	$7,240	$49,880	....	45,419

Articles.	1904	1913	1917	
	Quantity.	Quantity.	Quantity.	Value.
Fans....number..	1,797,130	9,952,301	12,202,140	$132,446
Glass, window....boxes..	5,509	8,634	5,725	39,898
Iron nail rod and wire....tons..	6,288	8,218	(a)	(a)
Jeans....pieces..	28,552	155,830	126,770	548,847
Lead....tons..	670	370	108	22,123
Machinery....value..	$49,869	....	(a)	(a)
Matches....gross..	2,980,555	3,125,435	1,035,080	392,791
Needles....thousands..	25,460	15,074	81,202	80,144
Oil, kerosene....gallons..	13,664,072	15,488,432	16,614,418	3,216,224
Paper and cardboard....tons..	....	1,242	(a)	(a)
Pepper, black and white....do....	254	231	303	112,410
Sandalwood....do....	3,474	2,091	1,793	280,641
Seaweed and agar-agar....do....	2,106	338	2,079	110,899
Sheetings, gray....pieces..	188,792	57,230	36,840	147,071
Shirtings:				
Dyed....do....	11,249	5,030	(a)	(a)
Gray....do....	630,402	408,971	242,130	993,681
White....do....	288,728	296,913	246,322	1,150,933
Soap....value..	$27,045	$66,678	....	274,834
Soda....tons..	642	3,245	1,381	78,047
Steel....do....	377	826	167	25,005
Sugar....do....	50,075	470,828	48,633	6,533,989
T cloths....pieces..	57,855	20,880	40,358	110,792
Timber:				
Hardwood....cubic feet..	....	6,010	3,276	1,505
Softwood....square feet..	....	5,446,957	378,556	17,580
Tin plates and slabs....tons..	63	2,357	2,908	521,647
Turkey reds....pieces..	86,418	34,459	41,677	134,992
Umbrellas....number..	131,649	94,511	154,751	81,076
Velveteens....yards..	41,021	182,150	65,294	12,749
Woolen goods....do......	65,672	19,873	(a)	(a)
pieces..	18,521	2,007	(a)	(a)

a Comparable figures are not available for 1917.

The above list of imports represents most of the important staples, the demand for which is comparatively steady. It will be noted that cotton and woolen goods make up more than one-third of the list. Machinery is ranked as a staple import, but does not appear in the list for 1913 and 1917 because it reached its destination in the interior via the transit pass from Shanghai. Railway supplies, while an important item of importation, do not constitute a regular import except during railway construction. As stated above, practically everything of foreign origin is imported at present through the medium of Shanghai. The little that is imported direct is bought on a cash-with-order basis.

American exporters, under normal freight and exchange rates, have found a profitable business in cotton piece goods. The following percentages of the respective imports were credited by the customs as American:

Articles.	1904	1913	1915
	Per cent.	*Per cent.*	*Per cent.*
Sheetings....	40	36	50
Drills....	90	46	12
Jeans....	50	....	....
Oil, kerosene....	50	30	25

The above proportions are merely approximate, as very large quantities of imports are landed from non-American bottoms.

A transit pass may be obtained for imports of foreign origin destined for an interior place, upon the payment of a surtax of one-half the import duty. This pass is supposed to exempt the goods from all further taxation. The transit pass is not necessary if the goods are reexported to another port from original port of entry. A destination tax (lotishui), however, is assessed on such transit-pass goods in many localities in the Nanking consular district, the usual reply to a protest against this tax being that the transit pass exempts the goods from further taxation en route and that the goods are not exempt from further taxation after they have arrived at their destination. This argument has been a satisfactory reason (to the local officials) for levying this tax immediately the transit pass has been surrendered—although the treaty expressly stipulates that the transit pass "shall secure for foreign imports, whether in the hands of Chinese or foreigners, in original packages or otherwise, complete immunity from all other taxation, examination, or delay.." (American commercial treaty, 1903, Article IV, par. 2.)

There are no foreign importing houses in the Nanking consular district other than two oil companies.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

All shipping connections with foreign countries are made at Shanghai, the American Express Co. being a convenient forwarding agent. There are four regular lines of river steamers and the Shanghai-Nanking Railway connecting this district with Shanghai. The facilities of the Nanking harbor for ocean traffic have been mentioned under "Treaty Ports and Foreign Concessions, Nanking." The harbor dues are: Vessels under 150 tons, 1 mace per ton; over 150 tons, 4 mace per ton. All cargo landed must pay 2 per cent of duty as a surtax for the maintenance of the port.

FACILITIES FOR TRAVEL.

Nanking is the only place in the district where fairly good hotel services are available. The Bridge House Hotel, just outside the north gate of the walled city, is under efficient British management and is conveniently located for train and river-steamer connections. It is also the agent for Thos. Cook & Sons. The rates are $5 Mex. to $12 Mex. per day. Automobiles may be hired for trips to the points of interest in and near the city. Carriages and jinrikishas are also available, and are preferable for the city trips because of the narrow streets.

The river steamers are equipped with comfortable cabins, and the food and service are usually good.

The first-class through tickets of the river steamers are interchangeable with the Shanghai-Nanking Railway either way, and the tickets of three of the lines are also interchangeable. Such an arrangement makes it easy to get stop-overs with a fair certainty of being able to continue the journey within 24 hours if that is desired. Both the Shanghai-Nanking and the Tientsin-Pukow railway lines have dining and sleeping car accommodations. These two lines connect at Nanking for Europe.

The best seasons for visiting this district are from March to May and from September to November. The period between May and September is frequently too warm for pleasure, though the weather is often ideal for excursions during this period, which finds the majority of the resident foreigners at the summer resorts of Kuling and Mokanshan. The early fall or late spring, therefore, will give the visitor the most accurate impression of the life and industries of the district.

TRADE ORGANIZATIONS IN DISTRICT.

There are no foreign trade organizations in this district.

Each port and inland trading center has its Chinese chamber of commerce, guilds, etc. Every line of trade has its own guild, such as the Piece Goods Guild, the Silk Guild, the Tea Guild, etc., and where the traders are numerous they have their provincial guilds. The provincial guilds are the arbiters of small personal disputes, with appeal to the courts. The business guilds (corresponding to labor unions) fix prices and arbitrate business disputes, the primary court of appeal being the local chamber of commerce. If the chamber of commerce is unable to render a satisfactory decision, the disputants' final appeal is to a court of law. The guild members are not obliged to present their cases to the guilds. In all important cases they apply to the proper court. The clubhouses of many of the guilds are very elaborate, and are used as headquarters for visiting members and friends.

AMERICAN INTERESTS.

The Standard Oil Co. of New York (according to customs returns) imports about 50 per cent of the kerosene oil that comes into the Nanking consular district—the remainder being credited (by inference only) to the Asiatic Petroleum Co., the formidable competitor of the American company. The American company has extensive properties at each of the three ports in this district—Wuhu, Nanking, and Chinkiang—and conducts an intensive distribution and sales system in the interior therefrom.

The Singer Sewing Machine Co. also conducts an elaborate distribution and sales system throughout this district. This company operates from its office in Shanghai and owns no real property in the Nanking district.

American interests are also involved in the operations of the British-American Tobacco Co., whose business can be estimated by the imports of cigarettes and by its tobacco cultivation and curing stations.

The American Red Cross is financing the Hwai River reclamation scheme and reconstructing the Grand Canal.

Aside from the interests just mentioned, the most general American interests in this district are those of the missionary organizations. The scope and extent of this missionary work along educational and medical lines have already been indicated. The missions also have stations and chapels for religious work in most of the important trade centers in the interior. Their general reputation is excellent, and their work, as a rule, is such as to create a favorable impression concerning Americans. The 520 American missionaries outnumber the missionaries of any other nationality by about 20 to 1; the French missionaries are next in number, but they do no medical or educational work along modern lines.

The conditions unfavorable to American trade in the Nanking district are:

(1) Lack of commission houses. There are none.

(2) Lack of direct ocean shipping facilities. There are no lines regularly touching at Nanking.

The conditions favorable to direct American trade with this district are:

(1) An apparent readiness on the part of the local merchants to deal directly with foreigners.

(2) The willingness of the banks to arrange for facilities for direct foreign trade.

(3) There is at present a large annual trade in goods of foreign origin, and such purchases are growing in importance. There is no one at present bidding to shift this from indirect to direct trade with foreign countries. This trade under normal conditions will increase several hundred per cent.

As a result of the war, the trend of trade in the Nanking district has been turned from Europe to Japan and the United States. High freight rates and adverse exchange have greatly handicapped trade with the United States as compared to that with Japan.

The most promising field for American commercial activity in this district is the development of the industries mentioned under the heading "Manufacturing and Other Industries" (see p. 592).

GENERAL TRADE SUGGESTIONS.

(1) Where possible, trade connections should be made with American firms in the field.

(2) The best method to market a commodity is to send a special representative with samples and advertising matter. In some cases, it is advisable that the representative have prompt access to a limited supply of the goods he is selling.

(3) The special representative should have connections with a well-known American house in the field. The connection should be made in Shanghai for this district until conditions make it possible to open an office at Nanking.

(4) Manufacturers of piece goods and related commodities should unite in a common sales department and send their representative to Nanking. A similar combination for iron and steel products, railway supplies, milling and mining machinery, etc., ought to find a mutually advantageous trade in the development of the industries of the district.

(5) Direct trade between this district and foreign countries will expand at the close of the war. This is the opportune time for American manufacturers and merchants to cultivate this market.

(6) Exporters should study the requirements of the market and endeavor to supply exactly what is wanted or something for which a demand can be created. It is futile to try to fit a farm harness to a water buffalo or to put a tractor in a Chinese rice paddy.

(7) In order to deal directly with the natives, a working knowledge of the Chinese language is essential.

(8) Only healthy college men of fixed habits and strong character should be sent to China.

SWATOW CONSULAR DISTRICT.

By Consul George C. Hanson.

LOCATION AND AREA.

The Swatow consular district comprises that part of the Province of Kwangtung east of 115° east longitude. Roughly speaking, it lies between the meridians of east longitude 115° and 117° 14′ and between the parallels of north latitude 22° 40′ and 25°. It occupies the same latitude as central Mexico. Its southern part lies between the same parallels of latitude as the northern half of Cuba. The Tropic of Cancer passes a little to the north of Swatow, the principal port, which is on the same parallel of latitude as Habana, Cuba.

The area of the Swatow consular district is about 15,000 square miles, being thus a trifle larger than the combined areas of Massachusetts, Connecticut, and Rhode Island.

POPULATION.

The estimated population of the district in 1909 was 5,000,000, equivalent to the combined population of Massachussetts, Connecticut, and Rhode Island, as given by the census of 1910. Most of this population is rural, no city having more than 100,000 inhabitants.

PHYSICAL FEATURES.

The district is well watered by the Han and East Rivers, with their tributaries. It is flat near the coast and gradually rises toward the southwestern part, where there are some high mountain ranges. The land is for the most part denuded of trees, though some forests exist in the mountainous regions.

CLIMATE.

The climate of the district is salubrious. The months of November, December, January, and February are delightful, the temperature never touching the freezing point. March, April, and May are rainy months, while June, July, August, September, and October are hot months. During September and October, Swatow is often visited by devastating typhoons, which create havoc among the shipping and crops.

POLITICAL SUBDIVISIONS.

The consular district practically lies within the confines of the Chaomei prefecture, which is composed of 14 hsien or districts. The prefecture is under the jurisdiction of a civil official called the taoyin and a military official called the commissioner of defense. Both these officials are responsible to the provincial government at Canton. Each district is governed by a magistrate, who also acts as judge. At Swatow there are civil and criminal courts. The Chinese Maritime Customs interests are in charge of a foreign commissioner and a Chinese superintendent, who work in conjunction. The Chinese superintendent of customs is also delegated by the Peking Government to look after affairs involving intercourse between Chinese and foreigners. At Swatow there are American, British, and Japanese consulates and French and Norwegian vice consulates.

EDUCATION.

Matters of education are in a transitory stage, because of the change from the old-style methods of Chinese learning to new westernized methods. At present there are Chinese schools still conducted along old lines, schools with a mixture of old-style and new-style learning, and schools conducted along modern lines. Chinese private schools are found in the first class, Chinese Government schools in the second, and foreign missionary schools in the third. Sons of wealthy Chinese families are taught by private tutors and perhaps receive an education that may be called more than elementary. The average Chinese boy receives only a few years' schooling (which enables him to read and write Chinese characters) in elementary schools, of which there are about 2,000 in the Swatow district. Few girls receive any schooling. There are no native colleges, technical schools, medical schools, or hospitals. American, British, French, and German missions conduct schools in places throughout the district. The American Baptist Mission has 91 elementary and 11 high schools and three hospitals in operation. The two best-known mission institutions are the Baptist Mission's Academy and the English Presbyterian Mission's Anglo-Chinese College at Swatow. The equipment of all these schools, so far as furniture is concerned, is crude and is made locally. Supplies for mission schools are received from the missions' publishing houses. There will be a slow advance in the use of foreign school and hospital supplies; it is not expected that the demand will be large for some years to come.

AGRICULTURE.

This district is purely an agricultural one, and the principal crops are sugar, rice, oranges, sweet potatoes, indigo, groundnuts, and vegetables. Because of the richness of the soil and the favorable climate, two and sometimes three crops a year are reaped. Intensive farming is widely engaged in but with very primitive implements. The water buffalo and bullock are used for plowing and other farm work, but not as beasts of burden. All carrying is done by men, women, and children. The fertilizers used are bean cake and human manure. Besides the water buffalo live stock consists of pigs, geese, and chickens, which are sold on the market or consumed by the owners. Fresh eggs constitute the only subsidiary farm product that enters into the export trade. In 1917, $201,994 worth of eggs were exported from Swatow, mostly to Hongkong and islands in the South Seas.

MINERALS AND MINING.

Mineral wealth exists in the form of deposits of coal and tin, but these have been only recently exploited. There are a few mines in operation on a small scale. The Yuan Yi Tin Mine Co. began work on its property in Kityanghsien in 1914, ore of good quality being extracted.

Wolframite ore was discovered about Swabue during the summer of 1917. Since then this ore has been found in other parts of the district, and many thousands of Chinese have been digging for this valuable mineral, which undoubtedly exists in large quantities.

COMMUNICATIONS.

Swatow, the trade port of this district, is connected with the outside world by means of steamship lines. No ocean-going steamers touch this port, but there is ample service at Hongkong, 180 miles distant, which is the main link between Swatow and foreign countries. There are British, German (in normal times), Norwegian, Dutch, Japanese, and Chinese coasting steamers plying between Swatow and Hongkong, other Chinese ports, Formosa, and British, Dutch, and French possessions in the southeastern part of Asia. Inland water navigation is carried on by means of steam and motor launches and Chinese junks. A few of the launches, especially of the passenger type, are run by foreign firms. The waterways of this district are so numerous that water communication is the cheapest and most used means of transporting merchandise from and to the interior. All important native trading centers are situated on navigable streams, and the products of the district can be easily sent by water from one place to another. As the element of time is not considered important by the Chinese, sailing junks or poling boats are more numerous by far than launches, which are practically confined to passenger traffic.

There is only one railway in this district, the Swatow-Chaochowfu Railway, 26 miles in length, connecting Chaochowfu, the principal inland city, with Swatow. This railway was constructed by a Chinese syndicate with a capital of $2,000,000 Mex.[1] (normally about $1,000,000 United States currency). Work was commenced on the line in 1904, and the railway was opened for traffic in November, 1906. The contractors were Japanese, who supplied all the material, the rails, bridge girders, and engines coming from the United States and the carriages from Japan. The rolling stock consists of 3 locomotives, 18 passenger cars, 4 vans, 24 covered and 26 open goods wagons. The freight rate is $0.02 Mex. per ton per mile. In 1915 the railway carried 1,002,643 passengers and 23,953 tons of goods. It is planned to make an extension from the present station to the harbor front in the near future. It is estimated that about $500,000 United States currency will be needed to make the necessary bridge, road-bed, and station improvements. There are no railways under construction. It is expected that lines will be constructed in the future connecting Swatow with Canton and Amoy.

The Swatow-Changlin light railway, a push-car line for carrying passengers, has recently extended its tracks as far as Chenghai, a distance of 10 miles from Swatow. It is reported that the company plans to double-track the line as soon as profits permit, when it will also be used to carry light freight.

It is reported that another light railway line will be constructed between Chaoyang and the landing place of the Swatow launches.

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[1] See footnote on p. 84.

There are no tramways, because the streets in the cities are too narrow for them and because the absence of roads outside of the cities prevents the location of such lines.

There are no roads in the district. The whole country is traversed by a network of paths along which travelers go from place to place on foot. No vehicles nor draft animals are in use on these paths. The more wealthy Chinese in going from place to place are borne in litters or chairs. These paths are kept in repair by the villages or by individuals philanthropically inclined.

POSTAL FACILITIES.

All inland towns of importance are reached by the Chinese Government Postal Service. Besides the Chinese post office, there are located at Swatow British and Japanese post offices. All these post offices accept parcel-post packages to the United States, and the British and Japanese post offices will sell money orders payable in America. Mail is sent to and received from the United States through the post offices mentioned above via Shanghai or Hongkong. Mail matter from New York City requires about 30 days to arrive at Swatow.

TELEGRAPHS AND TELEPHONES.

The Chinese Government Telegraph Service operates a line from Swatow to Amoy, one to Kaying, and one to Canton, all overland. There are no cables. The telegraph rates are $0.09 Mex. per word for telegrams sent within the province of Kwangtung and $0.18 Mex. per word for telegrams sent to places within China.

There are no telephones in this district, except two private lines—one a railway line connecting Swatow with Chaochowfu and the other a water-works line connecting Swatow with Chenghai. Several schemes for installing a system have been broached, but none have come to fruition. It is believed that a telephone system will be installed in Swatow some time in the near future.

NEWSPAPERS.

There are no foreign newspapers published in Swatow, but foreign publications from Hongkong and Shanghai are received, principally by foreigners. Two Chinese newspapers, the Ta Tung Pao and the Kung Yen Pao, with a combined circulation of about 4,000 copies, have been established at Swatow for five years. The advertising rates of these papers for 100 Chinese characters are as follows: For one week, $2 Mex.; for two weeks, $3.60 Mex.; for one month, $6.40 Mex.; for three months, $16.80 Mex.; for six months, $28.80 Mex.; for one year, $48 Mex. Two other vernacular newspapers of small importance have recently come into existence.

PUBLIC WORKS AND SANITATION.

Sanitary conditions in the Chinese cities of this district are bad. Streets, except where they are built and kept under repair by foreign supervision, are not in good condition. There are no sewerage systems nor public means of fighting fire, except at Swatow, and it is doubtful whether these will be adopted generally in the near future.

There are four electric-lighting plants in the district, at Swatow, Chaochowfu, Hsingning, and Kaying. The Swatow plant (Swatow Kaiming Electric Light Co.) was erected at a cost of $80,000 United States currency. At the beginning of 1919 it supplied 19,200 lamps.

A number of Delco light plants were sold in the Swatow district during 1918, most of which are operated on a commercial basis at a charge of $0.80 Mex. to $1.20 Mex. per lamp. Their small cost especially appeals to the Chinese. Electric lighting has become very popular among the Chinese, and during the next few years considerable development along this line should occur.

The Swatow waterworks (the only ones in the district) were constructed by a Hongkong engineering firm at a cost of about $450,000 United States currency. The service reservoir has a capacity of 800,000 gallons and the water is pumped from the River Han at Ampow. Construction work was finished in 1912. The quality of the water is good.

TREATY PORT OF SWATOW.

Swatow is the only treaty port in this district. There are no foreign concessions at Swatow, the city being under the control of the Chinese officials. Its population consists of more than 80,000 Chinese and about 700 foreigners. The only public activity of foreigners is manifested in the formation of committees employed in collecting and expending funds for the construction and maintenance of roads and pathways in the neighborhood of the dwellings where foreigners live. There is no limitation to the area in which foreigners may reside. The fact that there are no purely American general exporting and importing firms at Swatow is unfavorable for the development of American trade. British and German houses predominate.

FINANCE AND BANKING.

The various local currencies, fictitious and actually existent, may be enumerated as follows: The Swatow tael, the local or 7-mace dollar, the dragon dollar, the ".7.2.7" dollar, subsidary silver coins, and cash. To this list may be added the Haikwan or customs tael, which, however, does not constitute a business currency.

The Bank of Taiwan (Japanese) is the only foreign bank at Swatow. It does not deal in foreign exchange except between Swatow and Japan. Consequently, Hongkong is the clearing center for this district. The Bank of Taiwan pays 4 per cent on fixed deposits and 2½ per cent on current deposits per annum.

The principal functions of Chinese banks are to lend money to merchants and to issue paper currency. Overdrafts are common, and rates of interest vary from 7 to 18 per cent per annum throughout the year. The banks advance no money against real estate or crop security. Their profits arising from the issue of paper money are said to be very large.

MANUFACTURING AND OTHER INDUSTRIES.

There is little manufacturing in the Swatow district. There is one knitting mill, engaged in the manufacture of socks, and about a dozen cloth mills, manufacturing native cotton cloth, operated by Chinese capital along modern lines. Part of the output is consumed locally and part is exported to the South Seas for consumption among the Chinese residents there. Purely native industries comprise the manufacture of grass cloth and drawn work, cotton goods made in the homes, sugar from sugar cane, native wines, bamboo ware, bean oil, earthenware, chinaware, fans, liquid indigo, joss sticks, paper, ramie thread and twine, and paper umbrellas. Modern industries, though few in number, show a tendency to increase; the purely native industries, with the exception of the sugar industry, hold out little hope for increase in the future; the sugar industry has declined tremendously in recent years and appears doomed, because of the impossibility of the native sugar's competing with Hongkong refined sugars. The products of the industries mentioned above are sent largely to Chinese residents in the South Seas.

Foreign industries are few in number. There are feather-cleaning plants, under European management, a small ice plant, a soda-water plant, and a fertilizer factory, operated by a British company. The output of all these factories is small and insignificant. In 1882 there was erected at Swatow a large plant for the refining of sugar. After it had operated for six years at a loss, the project was abandoned and since then no attempt has been made to resume operations. There seems to be little hope that sugar will be refined at Swatow by foreign methods. The only possibility for manufacturing by foreigners on a large scale would appear to be in the establishment of cotton-goods mills, the products of which could be sold among the natives.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Swatow during the years 1904, 1913, and 1918:

Imports and exports.	1904	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$9,309,356	$14,681,075	$15,943,673
From Chinese ports	189,279	361,521	808,361
Total foreign imports	9,498,635	15,042,596	16,752,034
Reexports of foreign goods:			
To foreign countries and Hongkong	53,086	132,110	235,039
To Chinese ports	7,515	89,751	89,828
Total foreign reexports	60.601	221,861	324,867
Net total foreign imports	9,438,034	14,820,735	16,427,167
Imports of Chinese products	14,054,126	14,140,390	26,572,617
Reexports of Chinese products:			
To foreign countries and Hongkong	596,232	912,892	1,139,461
To Chinese ports	49,418	71,379	47,814
Total Chinese reexports	645,650	984,271	1,187,275
Net total Chinese imports	13,408,476	13,156,119	25,385,342
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	3,846,651	5.133,002	9,538,813
To Chinese ports	5,832,159	4,376,927	8,516,922
Total exports of local origin	9,678,810	9,509,929	18,055,735
Gross value of the trade of the port	33,231,571	38,692,915	61,380,386
Net value of the trade of the port	32,525,320	37,486,783	59,868,244

EXPORT TRADE.

Exports from Swatow consist mostly of articles intended for consumption by Chinese in the South Seas. Without this peculiar market Swatow would have difficulty in disposing of its products elsewhere. Products are brought from the interior to Swatow by junks along the numerous waterways that abound in this region. At Swatow the goods are loaded upon coasting steamers by means of lighters and shipped to Hongkong, Bangkok, and British, French, and Dutch possessions in the South Seas. In the following table is a list of the principal articles exported (not including reexports) during the years 1904, 1913, and 1918:

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
Bags, gunny and hemp ... number	2,983,932	867,247	1,717,440	$134,891
Bamboo and bamboo ware ... value	$51,053	$140,144	...	139,808
Chinaware ... tons	1,562	4,541	2,644	857,898
Cloth, native (nankeens) ... pounds	893,467	2,533	306,000	185,052
Eggs, fresh ... value	$207,212	$172,527	...	[a] 193,723
Fans ... number	2,611,543	1,866,721	1,012,000	36,316
Flour:				
Potato ... tons	3,395	4,425	3,114	219,973
Rice ... do	870	1,109	348	27,409
Grass cloth ... pounds	770,000	852,933	1,173,333	1,907,936
Groundnuts (peanuts) ... tons	2,183	1,549	632	49,807
Indigo, liquid ... do	4,035	1,683	1,558	233,646
Joss sticks ... do	1,646	1,512	1,179	177,246
Jute skin ... do	...	1,188	...	...
Oil, groundnut ... do	1,656	1,272	1,001	264,563
Oranges, fresh ... do	8,537	13,000	11,217	600,615
Paper:				
Joss ... do	3,238	3,738	3,064	1,094,599
Other ... do	6,386	7,225	6,458	1,331,598
Pottery (earthenware) ... do	6,718	9,209	5,446	346,284
Ramie thread and twine ... pounds	...	1,549,200	776,667	198,130
Sugar:				
Brown ... tons	39,532	28,956	28,134	2,401,497
White ... do	31,571	81,333	5,766	655,190
Tinfoil ... do	207	186	119	238,779
Tea:				
Black, Oolong ... pounsd	1,954,933	478,267	273,200	88,620
Green, Hyson ... do	31,333	8,827	41,867	10,800
Tobacco, prepared ... tons	1,833	2,086	1,808	1,032,346
Umbrellas, paper ... number	176,343	173,733	225,425	56,475
Vegetables, dried, salted, and fresh, not otherwise classified ... tons	13,501	16,699	7,625	105,873
Vermicelli and macaroni ... do	863	1,122	834	73,100

[a] Fresh and preserved.

Declared exports from Swatow to the United States during the years 1913, 1917, and 1918 have been as follows:

Articles.	1913	1917	1918
Drawn work	...	$282	$464
Feather	$693	6,604	...
Household effects	956	199	431
Wolframite ore	...	11,356	458,878
Total	1,649	18,441	459,773

The export trade is in the hands of the Chinese and is of little interest to foreigners.

IMPORT TRADE.

The imports of foreign goods at Swatow have not varied greatly from year to year during the last decade, though the few years before the European war showed a slight tendency toward an increase. The reason for this static condition is that for years no improvements have been made in transportation, banking, storage, or distributing facilities. Although a few steamers discharge their cargoes at wharves, the majority of them still unload by means of lighters. There is but one foreign bank and it does not deal in foreign exchange. Consequently most of Swatow's financing is done at Hongkong.

Each of the few foreign firms at Swatow has a comprador. Chinese firms purchase directly from stocks kept in Hongkong, there being little direct trade with the outside world except through the medium of Hongkong. Goods are sent up the country by Chinese firms by means of Chinese river junks and are subject to likin taxes at each inland customs barrier unless the goods have paid a surtax of 2½ per cent ad valorem, which frees them from these inland taxes. Goods intended for this market should be strongly packed because of the necessity of transshipment at Hongkong and at Swatow—operations that subject the packages to rough handling.

In the following table is a list of the principal imports (net) into Swatow during the years 1904, 1913, and 1918:

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
FOREIGN GOODS.				
Bêche de mer.....pounds..	301,867	364,267	392,666	$171,085
Coal.....tons..	56,715	65,175	19,352	337,546
Cotton goods:				
Drills.....pieces..	657	2,252	1,246	7,813
Flannels.....do....	28,590	40,190	13,399	75,882
Jeans.....do....	9,206	26,300	10,779	67,360
Sheetings, gray, plain.....pieces..	5,491	20	1,320	8,299
Shirtings:				
Gray, plain.....do....	101,169	102,124	51,200	284,891
White, plain.....do....	235,409	174,447	61,510	507,004
Dyed, plain, figured, etc.....do....	6,015	1,445	306	3,026
T cloths.....do....	28,314	14,878	4,720	18,184
Thread (spools).....gross..	....	48,124	23,918	105,256
Yarn:				
English.....pounds..	72,400	2,188	[a] 9,233,333	[a] 3,639,490
Hongkong.....do....	....	....		
Indian.....do....	19,299,200	20,245,383		
Japanese.....do....	10,000	588,800		
Fiber, hemp.....do....	539,067	389,600	639,220	146,709
Fish:				
Dried.....tons..	611	2,517	[b] 3,432	[b] 985,092
Cuttle.....do....	898	1,794		
Flour.....do....	4,911	16,566	93	6,544
Ginseng, all kinds.....pounds..	24,548	17,275	13,832	189,984
Matches, Japanese.....gross..	904,951	1,206,678	1,219,952	660,170
Medicines.....value..	$112,800	$195,325	....	233,333
Metals:				
Iron and mild steel, new: Bars and nail rods..tons..	946	1,365	288	45,014
Iron and mild steel, old.....tons..	848	864	219	10,590
Lead in pigs and bars.....do....	166	144	40	9,370
Tin in slabs.....do....	768	750	442	616,684
Tinned plates.....do....	655	809	283	161,362
Oil, kerosene. American.....gallons..	5,034,803	5,956,950	2,812,780	871,121
Opium.....pounds..	613,333	282,067	....	....
Rattan.....tons..	313	387	217	26,705
Rice.....do....	2,942	6,663	20,051	1,126,690
Sugar:				
Refined.....do....	1,390	3,006	1,634	211,092
White.....do....	871	5,257	9,342	996,334

[a] Yarns of all kinds.

[b] Fish and fishery products.

Articles.	1904	1913	1918	
	Quantity.	Quantity.	Quantity.	Value.
FOREIGN GOODS—continued.				
Woolen goods:				
Camlets, English............pieces..	2,013	1,127	a 177	a $5,843
Cloth, broad, medium, habit, and Russian... yards..	12,565	7,448	(b)	(b)
Long ells............pieces..	2,642	1,514	106	2,656
Spanish stripes............yards..	22,461	23,098	304	496
NATIVE GOODS.				
Bean cake............tons..	148,501	203,921	128,853	5,764,121
Beans............do....	60,812	48,320	36,966	1,908,345
Cotton goods:				
Nankeens............pounds..	339,467	368,400	241,333	131,077
Sheetings............pieces..	....	14,980	12,760	62,622
Shirtings, gray............do....	....	1,170	300	1,646
Yarns............pounds..	....	6,667	1,900,133	609,076
Cotton, raw............tons..	773	819	415	232,154
Fibers:				
Pineapple............do....	....	275	(b)	(b)
Ramie............do....	....	4,193	2,574	573,226
Flour, Shanghai mills............do....	23	817	13,942	997,972
Groundnuts (peanuts)............do....	3,515	7,214	5,256	458,314
Oil, bean, groundnut, and wood............tons..	2,246	1,700	(c)	(c)
Medicines............value..	$86,428	$210,880	....	302,905
Rice............tons..	178,044	49,667	140,439	10,581,686
Samshu............do....	2,734	4,206	1,309	207,190
Silk piece goods............pounds..	86,000	132,633	52,000	356,174
Tea:				
Black............do....	2,130,533	1,116,000	1,024,533	312,635
Green............do....	....	2,000	7,733	1,116
Tobacco, leaf............tons..	1,314	1,464	1,926	294,116
Wheat............do....	10,979	1,496	853	38,166
Vermicelli............do....	1,815	2,128	1,666	253,077

[a] Camlets and buntings.
[b] Figures not available for 1918.
[c] Groundnut oil alone, 272 tons, valued at $65,753.

The principal import item, cotton goods, comes mainly from England through Hongkong, where stocks are kept. Thread is also of British manufacture. Normally, flour came largely from the United States, but high prices of the American article, due to war demands, have prevented for the time being the importation of this grade, Chinese flour from Shanghai having taken its place. Ginseng is shipped from Kirin, Chosen (Korea), and the United States. Metals find their way in from Hongkong. Kerosene is principally American, Sumatran, and Borneo, though recently a poor grade of Japanese illuminating oil has entered this market. Sugar is imported from Hongkong, where there are several refineries engaged in treating raw Java sugars.

Generally speaking, imports into Swatow comprise actual necessities for consumption by a population whose standard of living is not high and whose purchasing power is small. Naturally, the bulk consists of foodstuffs, material from which clothing can be made, matches, and illuminating oils. There is a limited demand for caps, sweaters, playing cards, window glass, dyestuffs, condensed milk, needles, haberdashery, woolen underwear, socks, canned goods, cigarettes, groceries, and miscellaneous articles. The absence of roads prevents the use of motor cars, motor or other cycles, or other vehicles. Absence of any manufacturing on a large scale explains the failure to import machinery and accessories. Miscellaneous goods, such as are carried in stock at Hongkong, are obtained from that port, so the direct importation of such articles from abroad can not be expected. There is a growing demand for detachable motors for small boats and large marine motors, operated by kerosene, for launches. Inasmuch as the number of foreign importing houses is small, American firms generally find it best to make connections with Hongkong business firms, which are in a position to supply the needs of the Swatow market.

SHIPPING FACILITIES.

No ocean-going steamships call at Swatow. Freight from Swatow destined for Europe or America is taken to Hongkong by coasting steamers and there transshipped. Freight from Europe or America destined for Swatow is transshipped at Hongkong upon coasting steamers bound for Swatow. Cargo from America can be transshipped at Shanghai and carried in coasting vessels to Swatow. The principal lines engaged in the coastwise traffic are the Indo-China Steam Navigation Co. (Ltd.), the Douglas Steamship Co. (Ltd.), the China Navigation Co. (Ltd.), and the Osaka Shosen Kaisha. Other lines provide irregular sailings to near-by Chinese coast ports and to Singapore, Bangkok, and Dutch East Indian ports. Forwarding and express companies in Hongkong are in a position to attend to shipments from that place to Swatow. There are no such companies at Swatow. Ships drawing as much as 15 feet can enter the harbor. Unloading is usually done into lighters. The harbor dues are 4 mace (about $0.30 United States currency) per registered ton, or 40 cubic feet, for vessels above 150 tons and 1 mace (about $0.07½) per registered ton for vessels of less than 150 tons.

FACILITIES FOR TRAVEL.

There is only one first-class hotel for foreigners at Swatow. The rates charged per day are $8 Mex. and the accommodations and food are good. The best time to visit Swatow is during the months of November, December, January, and February, when the climate is delightful. The other months are warm. Swatow is most easily and comfortably reached from Hongkong, though there are occasionally direct steamers from Shanghai.

TRADE ORGANIZATIONS.

The British Chamber of Commerce is the only foreign chamber of commerce in Swatow. There is a Chinese Chamber of Commerce and about 20 guilds.

AMERICAN INTERESTS.

American interests, aside from those of the Standard Oil Co. and the American Baptist Mission, are small. The American Baptist Mission maintains mission stations at Swatow, Chaochowfu, Ungkung, Chaoyang, Kityang, and Kaying, where there are American missionaries, and at other places where there are Chinese preachers. The Seventh Day Adventist Mission is the only other American mission represented. The other foreign missions are the English Presbyterian Mission, the Basel Mission (German), and the French Catholic Mission. All these missions do evangelistic, medical, and educational work among the Chinese in the Swatow district. There are 21 Americans engaged in this mission field.

The Standard Oil Co. is the only American firm at Swatow. The British have the largest interests there and the Germans (ordinarily) the next largest. There are two Americans in the Chinese Maritime Customs service, two in the Standard Oil Co.'s office, and one engaged in several minor business enterprises.

It is difficult to tell what effect the war in Europe has had on American trade with the Swatow district, because such trade is largely indirect and loses its identity while passing through Hongkong. The high price of American flour resulting from the war has prevented its sale in this district. American kerosene has gone up in price on account of the high freight rates, but the amount of the sales has not decreased. Naturally the importation of European manufactured goods has fallen off, and there are opportunities for American goods to replace such articles as metals, dyestuffs, wire nails, condensed milk, thread, etc.

As indicated above, the best way to approach this market is through Hongkong, to which place Chinese merchants turn when they are desirous of purchasing a bill of goods. Representation there fully covers the Swatow market.

TSINGTAU CONSULAR DISTRICT.

By Consul Willys R. Peck.

LOCATION AND AREA.

The Tsingtau consular district comprises the Leased Territory of Kiaochow, which lies between 35° 53′ 30″ and 36° 16′ 30″ north latitude and 120° 8′ 30″ and 120° 35′ 40″ east longitude, the latitude being thus the same as that of Nashville, Tenn. The Leased Territory occupies a peninsula on the east coast of the Province of Shantung, bounded on the east by the Yellow Sea and on the west by Kiaochow Bay.

The area of the Leased Territory of Kiaochow is approximately 400 square miles, about one-half being included in Kiaochow Bay.

POPULATION.

The German census of 1913 gave a total population for Tsingtau of 60,484, divided as follows: Americans and Europeans (mostly Germans), 2,069; German military, 2,401; Chinese, 55,672; Japanese, 316; Koreans and other Asiatics, 26.

The Japanese census at the beginning of 1919 gave the following figures: Americans and Europeans (excluding Germans), 175; Germans, 338; Chinese, 78,711; Japanese, 19,313; total, 98,537.

The greater part of the population of the Leased Territory is concentrated in the city of Tsingtau.

In December, 1917, the total Japanese population in Shantung Province numbered 25,104. In the spring of 1914 there were only a few hundred at most.

PHYSICAL FEATURES.

The Leased Territory is comparatively hilly, the principal mountains being the Laoshan Range, on the western boundary. Small torrential streams are met with here and there. Afforestation was begun by the German administration on an extensive scale.

CLIMATE.

The average temperature in summer is 70° to 75° F. and in winter 40° to 50°. Rains come in summer and early autumn. The temperature in summer rarely rises to 95° and in winter it seldom falls to zero. The rainfall in 1915 was 21 inches, and the average temperature throughout the year was 55° F.

POLITICAL ADMINISTRATION.

The Leased Territory was under German control from 1897 to 1914, on a 99 years' lease, under the terms of the Kiaochow Convention, dated March 6, 1898. The forts of Tsingtau surrendered to a combined Japanese and British force on November 7, 1914, and the Territory has since been under military occupation by the Japanese forces.

In October, 1917, a department of civil administration was inaugurated in the army of occupation. Under the new department the railway, with the wharf office and coal mines, the electricity department, the telephone and water services, the gendarmerie, acting in administrative and judicial police capacity, and all other departments in matters not interfering with military measures came directly under civilian control, subject to the commanding general. The troops are directly under the commanding general.

EDUCATION.

Educational facilities were supplied in great abundance and excellence by the German authorities. Before the outbreak of the war in 1914 the government maintained a modern grammar school for European children, and in addition to this there was a girls' school conducted by Franciscan nuns. Village elementary schools for Chinese were also provided, and the higher education of Chinese was provided for by the German-Chinese High School (of college grade), with buildings designed to accommodate 520 pupils and a teaching staff of 28 Germans and 9 Chinese. None of these schools except the convent girls' school is now in regular operation. There is no means of estimating the percentage of literacy. There is practically no illiteracy among the Europeans, Americans, and Japanese.

There are no native Chinese schools or hospitals of any importance.

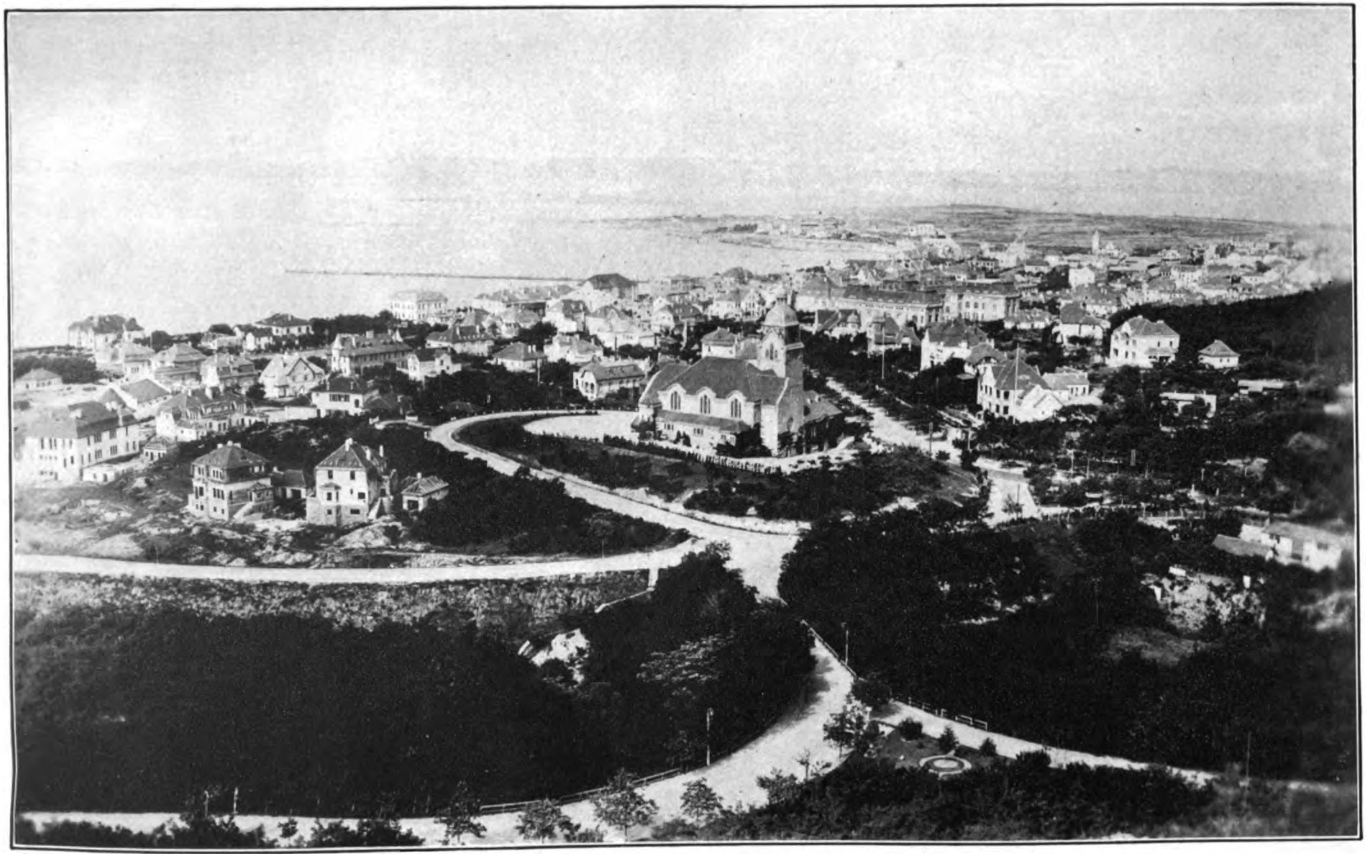
The American Presbyterian Mission conducts a high school for Chinese boys, with an enrollment of 43 pupils and 3 Chinese and 2 American teachers. The equipment is reported as meager, with nothing from America.

The Convent School maintained by the Franciscan Order enrolls 57 European scholars from kindergarten to high-school grades, employing 7 sisters as teachers and 3 pupil-teachers. There are no Chinese enrolled in the school now, though before August, 1914, there were 35 Chinese girls among the pupils.

The General Evangelical Protestant Missionary Society (German) previous to August, 1914, conducted a series of schools for Chinese scholars, enrolling about 300. While these schools are still carried on, they are greatly reduced in size, with about one-third of their former enrollment. Because of the closing of the government schools for German children, the society has opened such a school with 85 pupils, 2 teachers, and 6 assistant teachers. The equipment in all these schools is almost all produced locally.

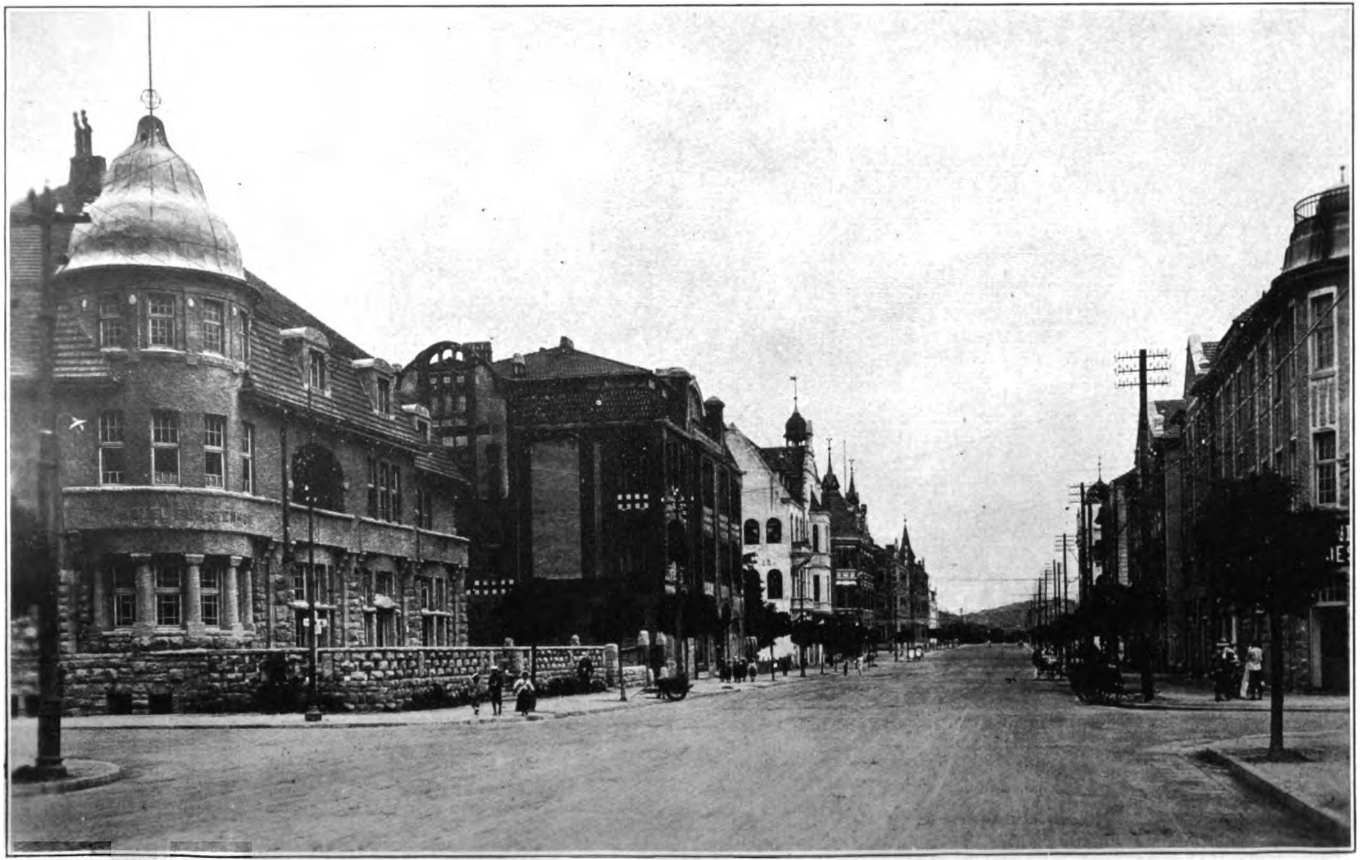
After their advent the Japanese authorities at once established schools for both Chinese and Japanese children. There are 3 Japanese grammar schools of 8 grades, and 1 girls' high school of 3 grades. There are 2,000 Japanese school children in Tsingtau. The schools for Chinese number 8 in Tsingtau and vicinity, with 359 scholars divided into 6 grades.

Hospitals in Tsingtau are maintained as follows: The Catholic Mission one, primarily for Chinese; the Faber Krankenhaus and Hospital, the former for Europeans, the latter for Chinese (a private institution); the Japanese Military Hospital (civilians also admitted). All these institutions maintain clinics as well. The equipments are either those remaining from the days of German control, in which case they are of German origin, or were introduced by the Japanese and are



Photograph by E. M. Newman.

FIG. 48.—CITY OF TSINGTAU, IN SHANTUNG PROVINCE.



Photograph by E. M. Newman.

FIG. 49.—STREET IN TSINGTAU.

for the most part of Japanese manufacture. Until political conditions are more settled there is little likelihood of an extension of this market, except to replace worn-out German articles. In 1918 work was begun on a new hospital, to be completed in June, 1919, at a cost of $40,280.

AGRICULTURE.

All the arable land in the Leased Territory is under cultivation, and the principal crops are such as the farmers themselves consume—for example, peanuts, cotton, corn, sweet potatoes, millet, wheat, fruit, etc. The seasons are the usual ones, with spring planting and autumn harvesting, except for wheat, much of which is sown in the autumn and harvested in the early spring. The farming methods and implements are of the most primitive sort, as must be the case when individual holdings are perhaps only 1 or 2 acres in extent. Draft animals are horses, mules, donkeys, and oxen. It is not unusual to see men dragging harrows and small plows. The only fertilizers used are manure of all sorts and soot-covered bricks from the inside of flues. The bricks in this case are sun dried. The agricultural products of the Leased Territory of Kiaochow do not figure in the exports through Tsingtau. The city is important chiefly, if not exclusively, as an entrepôt.

Cattle and other live stock are raised locally only for domestic purposes.

There are no mines in the Leased Territory of Kiaochow. For information concerning the mines operated in the 20-mile railway strip, as provided for in the Kiaochow convention, the reader is referred to the chapter on the Chefoo consular district.

COMMUNICATIONS: GENERAL INTRODUCTION.

Tsingtau is connected by steamship lines with the following oriental ports, which are, in turn, connected by direct lines with Europe and America: Shanghai, 335 miles from Tsingtau, 27 hours usually taken for trip; Hongkong, 1,165 miles, 90 hours; Kobe, 790 miles, 90 hours; Moji, 550 miles, 35 hours; Dairen, 256 miles, 20 hours.

The port is connected by the Shantung Railway, 256 miles long, with Tsinan, the capital of the Province of Shantung, situated also on the Tientsin-Pukow Railway, giving Tsingtau a rail connection of 476 miles to Tientsin, 667 miles to Nanking (Pukow), on the Yangtze, and 860 miles to Shanghai, the final stage being over the Shanghai-Nanking Railway.

KIAOCHOW BAY.

Half of the Leased Territory of Kiaochow is made up of Kiaochow Bay, 200 square miles in extent. This bay is navigable for small craft, but the only considerable city near its shores is Kiaochow, connected with Tsingtau by rail, 50 miles. There are no other waterways.

The Maritime Customs statistics show that, in 1917, 5,553 native junks entered Tsingtau, having a total cargo capacity of 105,383 tons, or an average of 19 tons per junk. Of these craft 206 were from Manchuria, 3,485 from other Shantung ports, 1,798 from Kiangsu

Province (Shanghai and other ports), 54 from Ningpo in Chekiang Province, and 10 from Foochow in Fukien Province. In the same year there were 756 steamers entered, of a total tonnage of 802,069. The freight rates of both steamers and junks constantly vary, and are, of course, different for different varieties of freight.

SHANTUNG RAILWAY.

The only railway line in the Leased Territory is the Shantung Railway. This line extends from Tsingtau to Tsinan, the capital of the Province. It is 256 miles long, with a branch line 27 miles long from Changtien to Poshan and 12 miles of other branch lines leading to coal mines and to the Yellow River.

This line was opened in June, 1904, and was constructed by the Shantung Eisenbahn Gesellschaft, which derived its right to do so from the German Government in a charter dated June 1, 1899. The right of the German Government to issue such a charter was secured from the Chinese Government by the Kiaochow Convention concluded March 6, 1898.

The railway is now operated under the Japanese department of civil administration. The arrangement is based upon the Japanese capture of the Leased Territory from Germany on November 7, 1914, in the course of which military operation the railway was occupied and retained by the Japanese military forces.

The year 1918 witnessed the opening of the Chinlingchen iron mine, and the building of the branch railway line to the mine necessitated the purchase of 5 miles of rails, 90 ore cars, 5 locomotives, etc. With the exception of the locomotives the supplies mentioned were furnished by the Wakamatsu Iron Works, of Japan, to which the railway is under contract to supply about 150,000 tons of ore annually. The total cost of this branch railway and equipment is about $1,000,000.

In the year 1916 three American locomotives and a large order of couplers were purchased from American firms, as well as certain supplies. Four American locomotives were purchased by the railway in 1917, 5 in 1918, and 4 in January, 1919. During 1918 the railway bought approximately $500,000 worth of American materials, including (besides the engines) boiler tubes, pumps, lathes, air-brake fittings, car-heating apparatus, couplers, roofing, and machine tools. Aside from these purchases the equipment of the railway is largely German. The present rolling stock includes 50 German locomotives, 16 American locomotives, 85 German passenger cars, and 1,179 German freight cars, as well as some manufactured in Japan and Manchuria.

The total freight moved on the Shantung Railway in 1917 was 705,254 tons, as against 586,835 tons in 1916. Receipts from all sources, including the sale of coal, were $3,890,193 in 1917 and $2,851,449 in 1916. Expenditures for all purposes, including the development of the new iron mine at Chinlingchen, amounted to $3,261,769 in 1917 and $2,008,293 in 1916.

The production of coal from the mines belonging to the railway for the year ended March 31, 1918, was slightly less than in the preceding year. Sales in local markets amounted to 213,030 tons, valued at 911,182 silver yen ($604,387 at exchange $0.6633), giving an average price of $2.78 per ton for all grades. Lump coal for household use sold at from $7.96 to $8.86 per ton. Exports to Shanghai, Hongkong, and Japan aggregated 129,141 tons, leaving a balance of 116,266 tons used on the railway, by the authorities, and in ways not specified. Bunker coal was supplied to vessels to the extent of 9,640 tons, at an average price of $3.50 per ton. Shipping agents reported that bunker coal was not available in the quantities required by vessels.

There are no additional railways or tramways under construction or in prospect in the Leased Territory.

ROADS.

Roads in the Leased Territory are generally of macadam, although in the city of Tsingtau itself a coating of asphalt is added to the most important thoroughfares. Throughout the Leased Territory the German authorities maintained the very highest grade of macadam roads, which was rendered easy by the proximity and abundance of road-building material.

In the rural districts clumsy native carts are used. Wheelbarrows are also common. The latter are often propelled partly by a sail. In the city freight is moved by man power. A long, low, two-wheeled truck is the ordinary conveyance. With this freight is conveyed a mile or more. A few horse-drawn wagons are in use, but the cheapest method of handling freight has been demonstrated to be by means of human labor.

Automobiles are numerous, in proportion to the European adult population.

POSTAL FACILITIES.

On October 10, 1918, an agreement was signed between Japan and China providing for an exchange of mails between the two systems at Tsingtau. A Chinese post office was reopened at Tsingtau for this purpose, and the Japanese military field post office was given the status of a regular Japanese post office. The public deals only with the Japanese post office, but postal facilities are now the same as at any other port in China, and international postal-order and parcel-post facilities are again available.

TELEGRAPHS.

As a result of the agreement mentioned above, the Chinese telegraph office in Tsingtau has resumed operations, the tariff being the same as elsewhere.

The other telegraph line in the Leased Territory is the Japanese military line. The local office will accept messages for any office in the world at Japanese rates. The rates for other Japanese offices—that is, in Japan, Chosen, Manchuria, etc.—are 40 gold sen (20 cents) for the first five words and 5 sen (2½ cents) per word thereafter. Rates to American cities (converted at $0.498 to the gold yen) are as follows: Tsingtau to New York, 2.66 gold yen ($1.32 United States currency); to Washington, 2.66 yen ($1.32); to San Francisco, 2.42 yen ($1.20); to Manila, 1.07 yen ($0.53).

There is a direct cable to Nagasaki, Japan, in which country there is a connection with trans-Pacific cables and with the wireless service to the Hawaiian Islands. Materials and supplies for this line are procured from Japan.

TELEPHONES.

The telephone apparatus in use is that installed by the German administration, except that alterations have been made in conformity with methods in use in Japan and that replaced parts are purchased in Japan. The central exchange is provided with a multiple-series, magnetic switchboard with backboard of the Delville system. There are more than 700 telephones in use, and the use of telephones is increasing. The rates are $25 Mex.[1] per quarter for wall telephones and $2 gold extra charge per quarter for desk telephones.

NEWSPAPERS.

There is only one newspaper published in this district, the Seitou Shimpo. It has a Japanese and a Chinese edition. The Japanese edition has a circulation of about 3,000 and an advertising rate of $0.65 Mex. ($0.32½ gold with exchange at $0.50) per column of about 12 words per day, with double charge for special columns. The Chinese edition has a circulation of about 1,100 and an advertising rate of $0.50 Mex. ($0.25) per column per day, with double rates for special columns. The estimated proportion of Japanese able to read newspapers is 85 per cent and of Chinese 50 per cent.

PUBLIC WORKS AND SANITATION.

There are no irrigation, conservancy, or reclamation projects in the Leased Territory.

As the city of Tsingtau is laid out precisely like a European city, the streets are wide, macadamized, and provided with sidewalks, sewers, and electric lighting. The gradients are nearly all easy, this having been accomplished only as the result of extensive cuttings and fillings. Asphalt is used as a surfacing material on the principal streets. Gutters and curbs are of stone and sidewalks of rolled and crushed stone.

The extent of macadamized streets in Tsingtau is 843,840 square miles, and in the whole Leased Territory 1,832,567 square miles. Taking 10 meters as the average width, this is the equivalent of 52.4 miles of streets in the city and 113.8 for the whole Leased Territory.

The city of Tsingtau is lighted by the Tsingtau Electricity Department, a subdivision of the Japanese administration. The works were taken over from the German administration and include, after some recent additions, two dynamos of 170 kilowatt amperes, one of 410 and one of 1,000 capacity, manufactured by Siemens & Halske and Siemens-Schuckert. The current is alternating and the frequency 50, voltage 120. The total income of the electricity department for the fiscal year ended March 31, 1919, was 295,723 gold yen ($147,270).

The streets are lighted by 52 lamps of 1,200 candlepower and 2 lamps of 2,000 candlepower, while a few of 3,000 candlepower have been installed. There are approximately 27,750 electric lamps in use in private houses and 16,200 in official buildings. Current for lighting purposes is charged for as follows: Less than 50 kilowatts, $0.24 Mex.; less than 100 kilowatts, $0.21; less than 200 kilowatts, $0.18; less than 400 kilowatts, $0.15; more than 400 kilowatts, $0.12. There are minimum charges, however, based on the number of lamps used.

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[1] See footnote on p. 84.

Current for industrial purposes is charged for according to the following scale (unit horsepower per month): Over 1 horsepower, less than 5 horsepower, $7 Mex. per horsepower; over 6 horsepower, less than 10 horsepower, $6.50; over 11 horsepower, less than 20 horsepower, $7; over 21 horsepower, less than 50 horsepower, $5.50.

Fifty-six government installations, totaling 1,336 horsepower, and 51 private installations, totaling 738 horsepower, made use in 1918 of electric current for power purposes. In that year the use of electric power was extended to the pumping stations and pumps in the Litsun district, 10 miles from Tsingtau, and for future extensions a plant of 1,200-kilowatt capacity has been ordered from the Kawasaki dockyards and another plant of 2,000-kilowatt capacity from Sweden (the latter for delivery in January, 1920).

Officials and official installations pay no charges for electricity.

The water supply is derived from 13 wells at Litsun, a village about 8 miles from Tsingtau. There is a storage reservoir at Litsun and one on Moltkeberg (Wakazuru-yama) in Tsingtau. The consumption of water in the city is about 4,415 tons per day and the supply is ample. There are 20 pumping stations, all supplied with German machinery that is being replaced with Japanese machinery as replacements are necessary. Charges are $0.15 Mex. per cubic meter for amounts less than 100 cubic meters and $0.14 per cubic meter for amounts in excess of 100 cubic meters.

There are 79,742 meters (49½ miles) of street sewers laid, having their outlet in the outer harbor near Arcona Island. These sewers are partly earthenware, of the Mannheim type, and partly concrete of the Freiberg type, both manufactured in Tsingtau. About 1.2 miles of sewers have been laid during the Japanese occupation, a large portion being of Japanese origin.

The fire department is equipped with two German chemical fire engines, five reels of hose, eight draft animals, and a staff of about 20 men. There is no system of fire alarms.

The large influx of Japanese residents since the beginning of the war is resulting in the extension of sewers, water systems, and electric light connections.

The building of factories and residences, and municipal work, including the laying out of new streets and sewers, and harbor improvements were carried on with great energy during 1917 and 1918. Among the important public works were the enlargements in the Small Harbor (for junk traffic) and the creation of a magnificent site for a large Shinto temple.

In the 13 months ended October 31, 1918, 149 building permits were issued, including 15 for factories. The floor area of the new factories was reported as 399,456 square feet and the cost of erection $195,564. The other buildings totaled 610,920 square feet of floor area, and the cost of erection was $905,969. In addition to these private operations the army of occupation erected the following buildings for Japanese use: Girls' high school, cost $121,000; primary school, cost $80,000; 25 residences for petty officials, cost $91,200. The military headquarters was reported to have purchased German business and residental property throughout Tsingtau to a total value of $750,000, while private Japanese purchases of German property were said to have totaled $150,000. A site was set aside for a middle school to be erected in 1919. In 1918, likewise, the headquarters let contracts for the filling in of 29,281,824 cubic feet of tidal area near the Great Harbor for $342,000, the work to be completed by September 30, 1920. Contracts totaling $72,732 were let for the laying of water and sewer pipes in the new factory district near the Harbor, to be completed by April 30, 1919. At the opposite extremity of the town a contract involving $60,622 was let for street work in a region called Taishichen, on former German Government land, the work to be finished in July, 1919. The published budget for engineering works to be undertaken by the department of civil administration for the period from April to September, 1919, was announced to total $1,426,297, an increase of 68 per cent over the same period of 1918.

STATUS OF KIAOCHOW IN RELATION TO FOREIGNERS.

The whole of the Leased Territory of Kiaochow is open to foreign residence and trade.

According to the figures of the Japanese Military Administration, the population of Tsingtau on December 31, 1916[a], was as follows:

Nationality.	Males.	Females.	Total in Tsingtau.	Total in Leased Territory.
Japanese	6,914	5,962	12,876	14,586
Chinese	18,683	3,801	22,484	166,673
German	111	220	331	331
Austrian	....	2	2	2
British	19	27	46	50
Russian	15	23	38	38
American	23	23	46	48
Danish	6	4	10	10
Norwegian	3	1	4	4
Dutch	4	....	4	4
French	....	2	2	2
Greek	1	....	1	1
Swiss	....	1	1	1
Total	25,779	10,066	35,845	181,750

Aside from restrictions due to the war, there are no limitations in regard to foreign residence.

The United States maintains a consul in Tsingtau. The only other consular officers are the Russian and the British, who are vice consuls.

Foreign trade has been encouraged by the Japanese administration, and American trade is under no political disadvantages as compared with the trade of other nations. The customs tariff is that of other Chinese ports, without local modifications.

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[a] EDITOR'S NOTE.—This table, showing the situation two years after the surrender of Tsingtau by the Germans, is presented here because it contains a more detailed statement than is available elsewhere. The reader should, however, consult in this connection the figures given on p. 611. There appears to be a discrepancy in the figures for the Chinese in Tsingtau, affecting the total for the city.

FINANCE AND BANKING.

The currency in circulation includes (1) Japanese Government war notes, unit silver yen; (2) Yokohama Specie Bank notes, unit silver yen; (3) notes of other foreign banks at other ports (rare); (4) notes of Chinese Government banks (rare); (5) Japanese gold currency, both metal and paper.

The currency of Tsingtau is officially the silver yen, which is practically the equivalent of the Mexican dollar, though in exchange transactions, on account of the more limited area in which the silver yen is current, the Mexican dollar is quoted at a slight premium, as a rule.

In business transactions the Kiaochow tael is also used. Previous to August, 1914, the local Chinese Maritime Customs fixed the values of Kiaochow taels and Mexican dollars in terms of the Haikwan, or Customs, tael as follows: 100 Haikwan (Customs) taels equal 105 Kiaochow taels; 100 Haikwan (Customs) taels equal $152 Mex. At the present time 100 Haikwan taels equal 156.80 silver yen, in customs transactions. Any currency other than silver yen, when tendered in payment of customs charges, is received by the Customs banks at the day's commercial rate.

The difficulties encountered in foreign commercial transactions are those inseparable from a currency of fluctuating value and are guarded against, as elsewhere, to a certain extent by fixing exchange in advance.

Foreign banks base their interest charge on 7 per cent, although in negotiating commercial documents and in similar transactions exchange sometimes modifies this rate. Overdrafts and like accommodations are charged for at 7 per cent.

The Hongkong & Shanghai Banking Corporation and the Yokohama Specie Bank have branches in Tsingtau. These banks are open to any variety of business, but are engaged mainly in the discounting of drafts, transfers of money, exchange business, and all operations incident to commerce. The latter institution is the agent of the Military Administration at the present time. The International Banking Corporation (American) expects to open a branch at Tsingtau in October, 1919.

There are no native banks, properly so-called. There are a few institutions of small capital that do a limited exchange business with near-by interior points and one large Chinese bank conducted on foreign lines that makes a specialty of exchange business. The last-mentioned bank also allows its patrons loans without security at 6 per cent, but it does not consider this a regular branch of business.

MANUFACTURING AND OTHER INDUSTRIES.

By the Customs Agreement of 1905 the German Government secured exemption from duty for machinery of various kinds intended for use in the Leased Territory, but, in spite of this assistance, manufacturing industries, with two or three exceptions, did not in the past become important in Tsingtau.

Among the principal industries and manufactures are those mentioned below:

Abattoir.—There is a government-operated abattoir that is equipped with modern appliances. In 1918 it slaughtered 46,349 animals.

Brewery.—The Tsingtau Brewery was started in 1904. Its capacity is not exactly known, but the commissioner of customs in 1913 estimated it at 32,000 gallons. It ceased operations on a large scale in 1914, and in 1916 was purchased by Japanese interests at a reported price of $500,000 silver ($250,000 gold).

Brickkilns.—There are brickkilns that turn out bricks and tiles of foreign style for local use.

Refrigerating plant.—A refrigerating plant owned and operated by an American concern under the name of William Katz has a monthly capacity of about 1,000 tons of frozen meat.

Furnaces.—Several small furnaces are engaged in melting brass and copper coins into ingots.

Bone-meal fertilizer.—A small factory with a capital of about $5,000 was started in Tsingtau in 1916 for the grinding of bones into fertilizer.

Egg products.—Two factories under German management in 1913 manufactured and exported about 1,500,000 pounds of dried egg products.

Railway repair shops.—In Syfang, a suburb of Tsingtau, are located the repair shops of the Shantung Railway. It has been announced that these shops are prepared to undertake the construction of railway cars.

Shipyard.—Attached to the Great Harbor is a well-equipped shipyard where small launches have been built. It was formerly provided with a 16,000-ton floating drydock, but this has been removed. The other machinery, including a 150-ton crane, remains, but no work of an extensive character, aside from repairs, has been undertaken in the last few years.

Spinning mill.—A spinning mill with about 30,000 spindles has been started in Syfang, a suburb of Tsingtau. All the machinery was purchased in England.

Silk filature.—A silk filature has been started in the Tsingtau factory district.

Flour mill.—A flour mill with a capacity of 500 kokus (about 2,500 bushels) has been installed on the waterfront.

Salt works.—The manufacture of salt from sea water by artificial evaporation has been undertaken by a modern factory.

The last four industries listed are under Japanese management and supplied with Japanese capital. With the exception of the brewery all these factories derive their raw material from the country around Tsingtau. Japanese capitalists seem to be inaugurating a vigorous development of the manufacturing possibilities in Tsingtau, chiefly along the lines indicated above, raw materials for such enterprises being obtainable both cheaply and abundantly in the hinterland of the Leased Territory of Kiaochow. An additional development in the near future will probably be iron works, using ore from the mines at Chinlingchen, 180 miles from Tsingtau, on the Shantung Railway. Plants for the reduction of this ore had been projected by the Germans at Tsangkow, 11 miles from Tsingtau.

Since the Japanese occupation of the Leased Territory of Kiaochow, the following enterprises (among others), with an aggregate authorized capital of $3,000,000, not including capital of parent firms, have opened establishments in Tsingtau: Flour mill, oil mills, silk filature, spinning mill, ice factory, rice mill, tanneries, match factory, egg-products factories, chemical factory, soap factory, smelting works (chiefly for the reduction of currency), salt factory, and cannery. These factories are located conveniently with respect to shipping.

The United States should be able to furnish factory equipment for Tsingtau, even though, in some lines, circumstances make unprofitable the selling by Americans of the finished factory products. Equipment for egg-products factories and small flour mills are already viewed with interest at this rapidly developing port, and it is certain that with a little effort oil-milling machinery and small electric-light plants could be sold, at least in limited quantities. However, since the potential purchasers are almost invariably Chinese without a knowledge of English, catalogues and correspondence alone are of no effect as sales agencies. The members of a prosperous Chinese firm selling peanut oil to the United States through a Japanese concern informed the American consulate recently that they had, for two or three years, been considering the installation of oil-milling machinery, but continued the old hand processes because no one had ever attempted to explain to them the benefits of the new method, nor what and how to purchase. The Chinese community of Tsingtau would welcome the establishment of an American general import and export concern there, to push the sale of American goods of this character. But, to interest the Chinese at the beginning, the exporting of Chinese produce should be a part of the firm's business. Since the United States makes large purchases of such products at Tsingtau, this feature of the business, under efficient management, would support the firm during the cultivation of American import trade.

COMMERCE OF THE PORT: INTRODUCTORY SUMMARY.

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Tsingtau during the years 1904, 1913, and 1918:

Imports and exports.	1904	1913	1918
Imports of foreign goods:			
From foreign countries and Hongkong	$2,399,652	$11,290,753	$20,249,726
From Chinese ports	3,705,592	8,030,414	7,540,042
Total foreign imports	6,105,244	19,321,167	27,789,768
Reexports of foreign goods:			
To foreign countries and Hongkong	....	26,804	141,931
To Chinese ports	....	162,586	1,169,941
Total foreign reexports	....	189,390	1,311,872
Net total foreign imports	6,105,244	19,131,777	26,477,896
Imports of Chinese products	2,715,471	6,051,061	14,317,679
Reexports of Chinese products:			
To foreign countries and Hongkong	....	672,467	116,436
To Chinese ports	15,628	75,521	221,181
Total Chinese reexports	15,628	744,988	337,617
Net total Chinese imports	2,699,843	5,306,073	13,980,062
Exports of Chinese products of local origin:			
To foreign countries and Hongkong	590,021	8,788,403	18,265,702
To Chinese ports	3,771,831	9,967,029	16,969,004
Total exports of local origin	4,361,852	18,755,432	35,234,706
Gross value of the trade of the port	13,182,567	44,127,660	77,342,155
Net value of the trade of the port	13,166,939	43,193,282	75,692,664

In 1913 Japan had 36.6 per cent of the direct foreign trade of Tsingtau, while in 1918 it had 83 per cent. In the latter year the United States had only 3 per cent.

EXPORT TRADE.

It is believed that the following table will show at a glance the relation of Tsingtau's export trade to that of the whole of China in recent years and also its development. The term "export" includes shipments to both foreign and Chinese ports, and the years 1914 and 1915 are omitted because the statistics for those years are incomplete. In the second column amounts are given in Haikwan taels, as variations in exchange often obscure the issue when conversions are made:

Years.	Value of exports.	Rank of Tsingtau among Chinese ports.	Tsingtau's percentage of total Chinese exports.
	Haikwan taels.		
1906	8,470,914	Fourteenth	2.2
1907	8,478,345	Fifteenth	2.1
1908	12,033,307	Twelfth	2.7
1909	14,736,629	do	2.8
1910	17,171,415	Seventh	3.0
1911	19,853,669	Sixth	3.6
1912	24,999,360	do	4.5
1913	25,692,373	do	4.4
1916	22,934,187	Seventh	3.2
1917	25,711,770	Sixth	3.7
1918	29,534,540	do	3.9

The following table shows the principal exports from Tsingtau to foreign countries and Chinese ports for the years 1913, 1916, and 1918:

Articles.		1913	1916	1918
Alum, white	pounds	52,668	228,627	266
Bean cake	tons	7,155	2,077	5,063
Beans, yellow	pounds	93,898	81,221	1,494,388
Bones, animal	tons	1,363	1,806	4,511
Breadstuffs: Wheat	pounds	52,402	754,110	48,979,206
Bristles	do	488,775	92,568	688,940
Caps, felt	number	57,391	1,274	2,452
Cattle	do	28,413	933	544
Coal	tons	161,523	68,583	172,311
Coke	do	627	415	57,836
Copper ingots	pounds	....	75,257,252	6,155,639
Cotton, raw	do	6,420,575	3,279,381	4,180,190
Cuttlefish	do	164,521	150,822	77,273
Dates:				
Black	do	11,635,372	382,242	238,070
Red	do	....	555,142	952,679
Eggs:				
Albumen	do	213,066	....	136,724
Yolk	do	1,198,197	....	486,381
Whole, prepared	do	37,240	....	23,940
Fresh	number	27,056,000	4,004,140	3,231,770
Fibers: Hemp	pounds	615,125	7,049	5,586
Fish, dried and salt	do	251,769	519,764	137,655
Glassware	do	894,425	664,069	641,326
Hats, straw	number	187,708	54,382	7,182
Hides, cow	pounds	5,167,981	5,290,075	5,958,001
Hair, human, and manufactures of:				
Hair	value	$12,502	....	[a] 11,837
Nets	do	$408	$36,824	$52,520
Lead	pounds	....	11,571	....
Macaroni and vermicelli	do	329,042	35,245	78,337

[a] Pounds

Articles.	1913	1916	1918
Meats, fresh .... pounds..	11,571,931	4,432,757	13,745,683
Medicines .... value..	$268,399	$77,793	$48,042
Oils:			
Bean .... pounds..	3,548,307	12,094,355	22,107,659
Castor .... do....		1,102,437	1,181,838
Peanut .... do....	19,567,226	31,193,953	45,621,527
Pears, fresh .... do....	1,955,898	87,780	488,376
Peanuts:			
In shell .... do....	15,274,917	632,548	18,354
Kernels .... do....	121,114,721	70,336,385	65,799,888
Salt .... do....	46,748,835	103,400,850	440,704,810
Seeds:			
Apricot .... do....	1,007,342	64,771	90,573
Melon .... do....	626,829	883,652	458,451
Sesame .... do....	112,784	290,472	194,579
Silk and silk goods:			
Silk, raw, white—			
Not re-reeled, not steam filature .... do....	37,373	29,526	53,599
Reeled from dupions .... do....	3,059	1,729	665
Steam filature .... do....		3,990	7,182
Silk, raw, yellow—			
Not re-reeled, not steam filature .... do....	584,136	168,132	290,206
Steam filature .... do....	27,132	76,475	124,355
Re-reeled .... do....		23,275	23,541
Cocoons .... do....		40,964	36,974
Cocoons, refuse .... do....	1,142,736	141,379	5,187
Waste .... do....		771,001	1,659,175
Pongees, Shantung .... do....	916,902	622,706	
Piece goods .... do....	16,093	2,394	8,246
Skins: Goat, untanned .... number..	131,826	126,150	134,555
Straw braid .... pounds..	11,609,304	2,020,802	1,474,571
Tallow, animal .... do....	4,237,114	3,561,474	6,881,154
Timber, softwood .... square feet..		1,150,975	1,619,344
Tobacco, leaf .... pounds..	1,463	1,240,624	18,271,939
Vegetables, fresh .... do....	4,872,056	2,233,602	712,880
Walnuts .... do....	1,908,816	395,808	175,161
Wool, sheep's .... do....	412,167	771,267	636,006
Zinc:			
Spelter .... do....	2,394	125,818	
Old .... do....	58,121	524,419	738,815

The correspondence of the Tsingtau consulate shows that many American firms are interested in exports from Tsingtau of goods of local origin, and the following table (covering 1918) is given as of probable interest, only important articles being listed:

Articles.	To Japan.	To other countries.	To Chinese ports.
	Pounds.	*Pounds.*	*Pounds.*
Bristles	23,142		665,798
Cotton, raw	2,556,526	70,357	1,553,307
Hides, cow	5,516,042	86,051	355,908
Oil:			
Bean	3,007,662		19,099,997
Peanut	28,647,934	1,510,082	15,463,511
Peanut kernels	37,170,175	1,141,672	27,488,041
Straw braid	1,206,975	69,160	198,436
Wool, sheep's	294,196		341,810

The following modifications of direct trade with foreign countries took place during the period of the war: Direct exports to Germany, France, Belgium, the Netherlands, and Italy entirely ceased, although before the war their combined quota of direct exports was 26 per cent; in 1917 only 35 per cent of exports went through Chinese ports, instead of 53 per cent, as in 1913; Japan's share of the trade increased from 8 to 59 per cent in the same period; and that of the Russian Pacific ports decreased from 9 to 1 per cent. There had been no very striking changes in direct exports to the United States up to the end of 1917, but in 1918 (as shown on the next page) the value of such exports represented an increase of $2,732,976 over the preceding year.

The most active seasons for collecting and shipping the principal exports may be indicated as follows: Beef, business throughout the year; hides, October to April; bean oil, December to June; peanut oil, December to June; peanuts, November to April; silk pongees, October to February; silk, raw, August to November; straw braid, October to February.

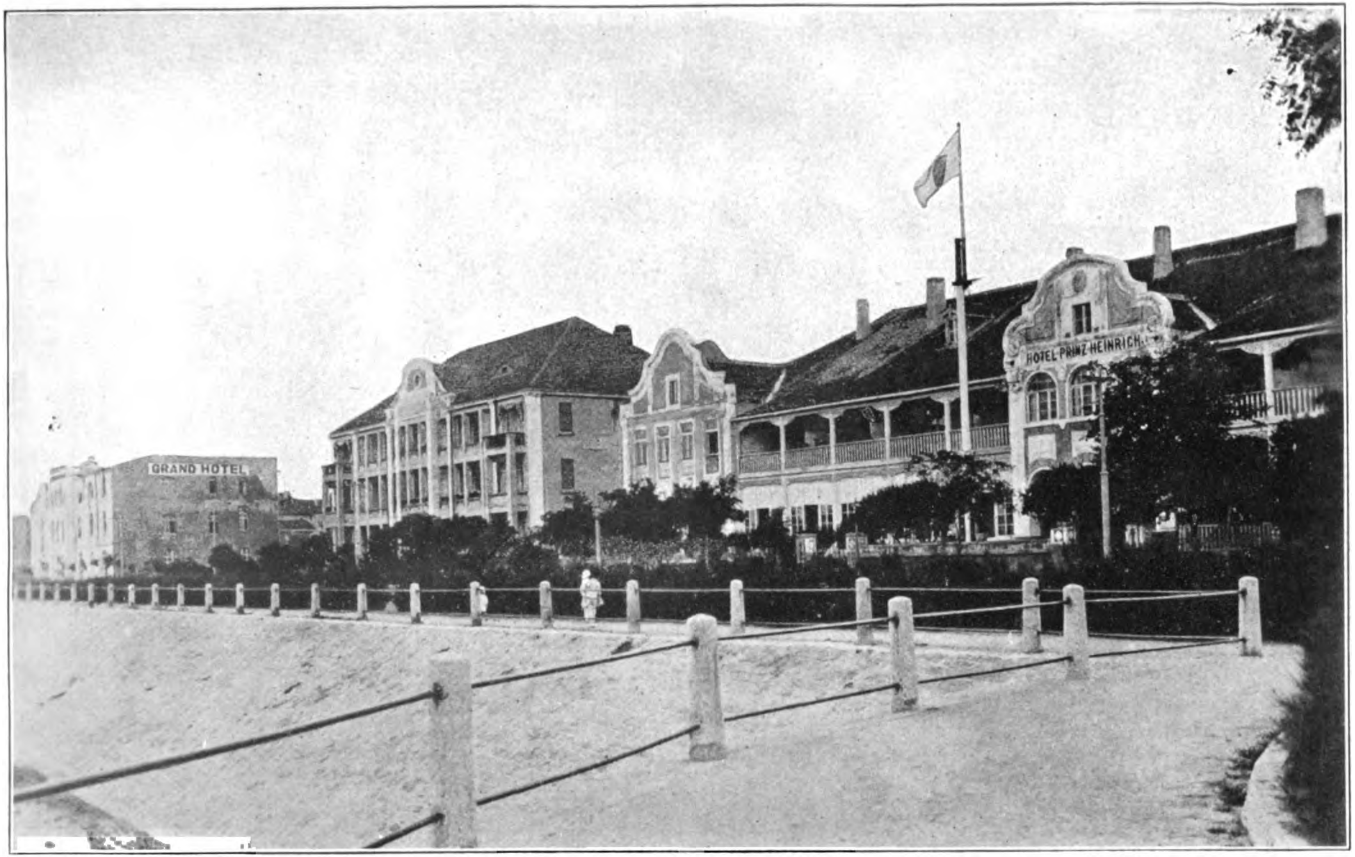
The growth of exports from Tsingtau has been fairly consistent in the past decade. Because of the fact that Chinese produce for export is generally bought locally through compradors from dealers who assemble at the port, a factor of the first importance in the export trade is the presence of a number of exporting firms dealing in the same commodities, thus providing a market to attract the Chinese dealers.

During the years of the war the direct steamship connection with Europe was eliminated and at times there has been a shortage of local, as well as ocean, freight space which has hampered exports. On the whole, however, Tsingtau is very well equipped for this business, having a railway to bring the goods from the interior and magnificent docks for the accommodation of shipping.

As has been said, export business is done through compradors and the terms are arranged at the outset. Usually Chinese sellers pay the comprador 2 per cent on straw braid and 1 per cent on other goods. Bargain money may or may not be paid on conclusion of purchase and full payment on shipment of goods.

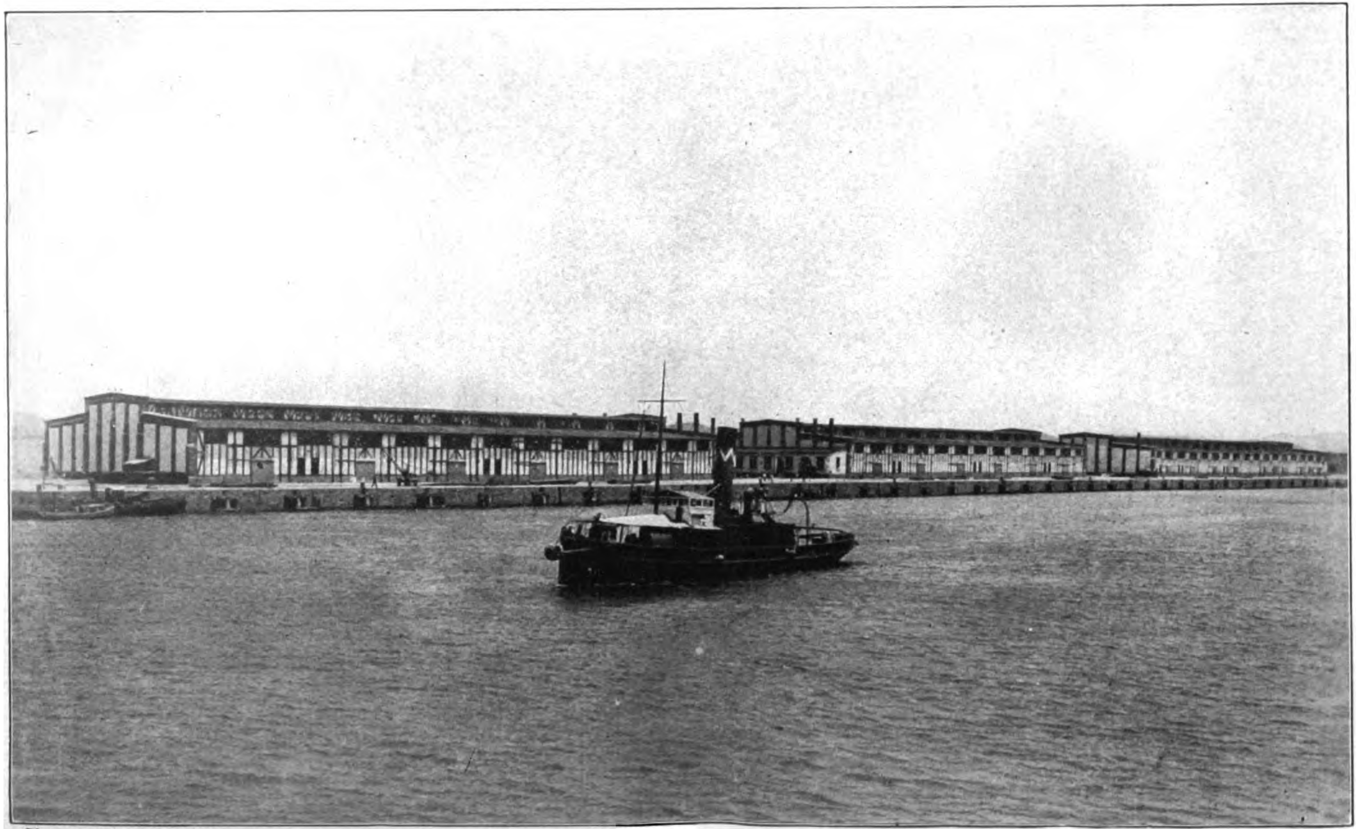
The following table shows the articles declared at the Tsingtau consulate for exportation to the United States during the years 1913, 1917, and 1918:

Articles.	1913		1917		1918	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
TO UNITED STATES.						
Brass ingots..........pounds..			224,000	$31,500		
Bristles..................do....	125,063	$99,146	105,685	70,172	83,121	$73,732
Castor oil..............gallons..			4,000	4,032		
Eggs: Dried, yolk, etc. pounds..	79,293	32,846			1,450	1,353
Hides..............pieces... pounds..	12,780 298,735	54,673				
Household effects............		1,270				
Meat, preserved.......pounds..			6,186	1,258		16,546
Peanuts:						
Unshelled............do....	6,720	214				
Kernels...............do....	384,800	15,570	856,000	60,076	718,800	55,772
Peanut oil............gallons..			769,400	673,981	2,900,444	2,791,729
Rugs............square yards..	34	121				
Silk, pongee.........pieces... pounds..	3,541 7,672	14,202				
Soya bean oil............do....	121,242	5,849	4,818,656	517,277	7,759,314	962,591
Straw braid..................		756,121		31,398		227,572
Straw hats....................						3,754
Tallow, animal.......pounds..			75,333	11,414		
Walnuts..................do....	76,500	3,613				
Wool......................do....	93,076	12,351				
Zoological specimens..........		150				
All other articles.............						1,035
Total..................		996,126		1,401,108		4,134,084
TO PHILIPPINE ISLANDS.						
Coke.....................tons..			155	6,355	370	6,105
Meat:						
Preserved........pounds..				1,052		
Fresh.................do....			5,026,284	477,851	8,509,050	845,652
Total..................				485,258		851,757
Grand total.............		996,126		1,886,366		4,985,841



Photograph by E. M. Newman.

FIG. 50.—THE BUND AT TSINGTAU.



Photograph by E. M. Newman.

FIG. 51.—DOCKS AT TSINGTAU.

IMPORT TRADE.

Tsingtau's foreign imports during the last decade have been roughly one-quarter cotton piece goods, one-quarter cotton yarn, one-quarter miscellaneous articles each less in value than 1 per cent of the total foreign imports, and the remaining quarter made up of 8 or 10 staples (among which kerosene is easily first, with about 5 per cent of the total, and matches second). Cigarettes in 1916 climbed suddenly to about 7 per cent of the total foreign imports. There have been no other notable or sudden changes in the receptivity of the people to foreign imports, but only a slow and normal advance.

The following table shows the net total foreign imports at Tsingtau (direct and via Chinese ports) for the years from 1906 to 1918 (except 1914 and 1915):

Years.	Value.	Rank of Tsingtau among Chinese ports.	Tsingtau's percentage of total foreign imports of China.
	Haikwan taels.		
1906	16,940,667	Seventh	4.9
1907	16,416,053	Eighth	3.8
1908	15,718,278	do	3.9
1909	19,422,133	Sixth	4.6
1910	20,653,319	do	4.4
1911	20,894,830	Eighth	4.4
1912	23,955,281	Sixth	5.0
1913	26,207,915	Seventh	4.5
1916	18,896,318	do	3.2
1917	22.538,383	Eighth	4.1
1918	22,194,381	Seventh	4.0

Previous to the war both the Hamburg-American Line and the North German Lloyd had direct sailings to European ports, but since the war, with occasional exceptions, all European and American imports have required transshipments at Japanese or Chinese ports, generally Kobe or Shanghai.

The liberal financial accommodation allowed by German banks to their nationals is well known, and the long credit they were thus able to give Chinese purchasers was an advantage. At the present time most of the import business is in Japanese hands, and they are not, as a rule, extending long credits. In fact, Chinese merchants state that in many lines cash payment is required. High prices for exports (in spite of cheap gold) and the appreciation of silver help to overcome Chinese reluctance or inability to buy under these conditions.

Distribution of imports to the interior is by the Shantung Railway and thence, generally, by Chinese carts. For information on this topic the reader may be referred to the chapter on the Chefoo consular district.

The table following shows the principal imports of foreign goods into Tsingtau for the years 1913, 1916, and 1918.

Articles.	1913	1916	1918
Asbestos...pounds			14,231
Bags, gunny...pieces	1,068,804	1,003,235	1,492,995
Beer and porter...value	$34,208	$79,492	$12,275
Borax...pounds			13,566
Brass and yellow metal sheets...do	98,420	6,118	
Butter...do	96,159	13,832	43,832
Buttons, brass...gross	118,209	33,955	12,296
Candles...pounds	266,800	175,294	382,909
Chinaware...value	$46,246	$25,659	$37,503
Cigarettes...do	$307,332	$1,079,152	$1,103,204
Clocks...pieces			6,316
Coal...tons		14,338	7,899
Copper sheets...pounds	183,274	22,610	
Cotton manufactures:			
Sheetings, gray, plain—			
American...pieces	82,227	15,880	2,380
English...do	7,830	3,283	4,910
Japanese...do	243,542	239,100	241,809
Shirtings, gray, plain...do	382,304	117,622	88,687
Shirtings, white, plain—			
Japanese...do		5,608	38,933
Other...do	95,204	51,735	26,087
Drills—			
American...do	22,814	2,472	
English...do	4,323	269	2,730
Japanese...do	4,710	11,063	13,282
Jeans—			
American...do	1,780		1,200
English...do	181,085	11,768	9,391
Japanese...do		107,076	13,282
T cloths—			
English...do	392,992	87,826	103,213
Japanese...do	25,813	181,620	404,893
Cambrics, lawns, and muslins, white, dyed, or printed, ...pieces	26,461	8,656	15,565
Chintzes and plain prints...do	136,488	29,195	70,827
Printed drills, furniture coverings, and twills...do	13,316	300	2,593
Printed sateens...do	15,596	2,970	2,179
Printed T cloths...do	21,875	352	1,375
Italians and lastings—			
Fast black...do	89,697	64,581	39,183
Plain, colored...do	187,982	86,902	141,062
Figured...do	175,085	56,009	32,179
Dyed shirtings and sheetings, plain...do	5,379	3,621	3,631
Turkey red cambrics and shirtings...do	87,289	86,126	76,229
Spanish stripes...do	12,636	648	865
Flannelettes...do	14,354	14,805	14,782
Colored woven cottons...yards	125,457		
Velvets and velveteens...do	51,912	14,050	18,249
Blankets...pieces	31,414	26,742	
Handkerchiefs...dozens	17,066	29,510	23,289
Towels...do	126,968	127,949	29,877
Yarn—			
Indian...pounds	9,118,347	3,777,732	1,438,661
English...do	399		
Japanese...do	27,920,956	29,363,607	13,056,610
Cotton thread, on spools...gross	27,327	16,462	20,458
Dyes:			
Aniline...value	$223,506		$18,987
Indigo—			
Artificial...pounds	4,678,674	24,206	45,220
Natural, liquid...do		123,291	4,655
Lead, white and yellow...do	382,907	162,526	222,908
Logwood extract...do	131,271		6,650
Electrical materials...value	$29,058	$39,273	$52,997
Enameled-ware basins...dozen	11,755	6,449	7,414
Flour...barrels	52,106	873	265
Fish, dried, fresh, salt...pounds	2,292,133	1,181,600	1,757,329
Glass, window...boxes	16,664	1,664	4,268
Glassware...value	$13,260	$9,149	$13,662
Gypsum...pounds		7,847	92,701
Iron and mild steel:			
New—			
Bars...do	2,384,158		351,785
Nail-rod...do	493,962	2,798	
Hoops...do	400,729		186,200
Nails, wire...do	1,288,770	449,274	578,962
Sheets and plates...do	917,567	292,384	305,368
Wire...do	480,263		159,733
Old...do	18,646,467	6,686,048	3,180,695
Iron, unmanufactured...do	513,912	15,029	39,634
Iron, galvanized, sheets...do	901,740	173,831	184,737
Iron and steel manufactures...do	3,705,247	163,590	47,527

Articles.	1913	1916	1918
Lead:			
In pigs..........pounds..	549,024	117,040	66,834
Manufactures of..........do....	3,325	4,256	1,197
Kerosene, total..........gallons..	9,364,065	6,924,484	6,106,002
American..........do....	5,111,727	2,478,617	2,359,930
Japanese..........do....	....	1,408,800	583,866
Russian..........do....	1,754,962	....	....
Persian..........do....	....	1,446,503	....
Sumatra..........do....	2,497,376	1,590,564	3,162,206
Lamps and lampware..........value..	$44,804	$13,350	20,511
Matches, Japanese..........gross..	6,610,566	3,716,069	2,627,470
Mats..........number..	519,890	109,135	285,632
Metal, white or German silver, sheets and wire......pounds..	....	7,847	4,738
Milk, condensed, in tins..........dozen..	14,743	5,505	5,110
Needles..........thousands..	534,605	43,675	209,075
Nickel..........pounds..	17,423	931	3,591
Opium..........do....	2,181	15,578	7,315
Paper..........do....	6,491,390	2,442,412	1,626,324
Pepper, black..........do....	540,778	208,544	457,520
Quicksilver..........do....	4,788	981	532
Saké..........value..	....	$89,268	$96,729
Seaweed..........pounds..	4,884,558	3,869,236	5,399,135
Silk piece goods, mixtures..........do....	87,093	31,454	37,025
Soap..........value..	$49,007	$44,202	$96,671
Soy..........pounds..	....	771,001	406,464
Soda..........do....	5,083,925	....	813,295
Steel..........do....	999,495	....	65,303
Stores, household..........value..	$89,226	$53,457	80,466
Sugar:			
Brown..........pounds..	21,533,897	13,994,792	25,698,127
White..........do....	5,249,510	3,093,048	10,780,714
Refined..........do....	11,359,530	6,509,419	17,932,789
Candy (crystals)..........do....	2,687,797	999,894	3,485,398
Timber:			
Hardwood..........cubic feet..	23,983	8,862	21,400
Softwood..........square feet..	4,659,991	1,431,968	1,304,199
Tin..........pounds..	20,083	15,162	15,827
Tin plates..........do....	3,072,965	3,413,711	2,540,034
Wines and spirits..........value..	$74,823	$6,859	$138,963
Wool and cotton unions..........yards..	83,878	27,214	4,908
Woolen goods:			
Cloth, broad, medium, and habit..........do....	2,060	160	205
Spanish stripes..........do....	2,656	993	177
Other..........pieces..	2,296	280	61
Woolen yarn..........pounds..	35,644	12,768	16,359
Zinc, and manufactures..........do....	190,988	2,926	31,787

With the exception of kerosene, none of the above imports offers any great opportunities for American manufacturers and exporters. Machinery, however, such as weaving, spinning, and milling, undoubtedly holds promise. In this line more than in most it is imperative to be represented by active and capable local concerns, though in the matter of railway equipment American interests have been satisfactorily served by occasional visits of salesmen.

Japanese merchants have had, naturally, a great advantage in Tsingtau, but this is discounted somewhat by the universal practice of Chinese buyers of sending orders to Chinese brokers in Shanghai.

SHIPPING FACILITIES FOR TRADE WITH UNITED STATES.

Among the steamship lines operating between Tsingtau and other Asiatic ports are the following Japanese companies: Nippon Yusen Kaisha, Osaka Shosen Kaisha, Harada Steamship Co., South Manchuria Railway Co., Dairen Steamship Co., Awa Steamship Co., and Chosen Yusen Kaisha. These lines have steamers connecting the Leased Territory with ports such as Osaka, Kobe, Moji, Ujina, Dairen, Chemulpo, Tientsin, Shanghai, and Hongkong.

In addition to the above Japanese lines, the British firms Jardine, Matheson & Co. (Ltd.), and Butterfield & Swire (Ltd.) have occasional steamers calling at the port. Chartered vessels, also, occasionally call.

Through the steamship companies it is possible to get through bills of lading to and from Tsingtau and foreign ports, but there are no other forwarding or express companies having extensive connections.

The magnificent harbor gives berthing accommodations for more than 20 vessels 300 feet in length, and the minimum depth of water beside the wharves is 27 feet, while usual low water gives 33 feet. The harbor is ice-free, and railway spurs run onto the wharves. Wharves and harbor are in a bonded area. Machinery, tools, etc., used for manufacturing, industrial, and agricultural purposes within the Leased Territory are duty free. Tonnage dues are 1 cent ($0.01) silver per ton per day, and there are no pilotage fees.

In connection with this subject, the reader may be referred, for additional information, to the section on "Communications" (p. 613).

FACILITIES FOR TRAVEL.

The Grand Hotel, Grand Hotel Annex, and Strand Hotel (last in summer only) furnish excellent accommodations and cuisine. The rates are, at present exchange ($0.70), about $5 gold per day. One large room with bath for one person is $45 silver per week; two persons, $80 silver. Railway and steamer accommodations at Tsingtau are excellent, including a night train to Tsinan, the provincial capital, and junction with the north-and-south Tientsin-Pukow Railway. Tsingtau is a widely patronized summer resort, and the climate is equable and agreeable at all times.

TRADE ORGANIZATIONS IN DISTRICT.

There are two chambers of commerce in Tsingtau, Chinese and Japanese, the latter styling itself the Tsingtau Business Association. There are also Chinese guilds, such as the butchers' guild, etc., but these do not have a direct bearing on foreign commerce.

AMERICAN INTERESTS.

There has never been an American firm in Tsingtau actively engaged in either importing or exporting general merchandise.

In addition to the German missionary societies represented in the Leased Territory and the Franciscan Convent, with one or two Catholic priests, there are no Western mission societies in the Territory with the exception of the American Presbyterian Mission. This mission conducts a boys' (Chinese) school (see under "Education"), and generally has four resident missionaries.

At the present time there is an American-owned refrigerating plant, chiefly engaged in exporting fresh beef to Manila and Vladivostok, and the same firm has a meat-packing plant.

A large American oil company has an extensive installation, tanks, etc. The market is shared with a British concern provided with similar equipment, and with Japanese concerns marketing American and Japanese products.

GENERAL TRADE SUGGESTIONS.

Suggestions with regard to the extension of American trade in the Tsingtau district may be epitomized in the statement that what is needed is American representation. The absence of American firms has been noted. At the present time this defect is in prospect of being remedied, and the consulate may be able in the future to assist American exporters by suggesting a resident American firm capable of handling their interests. In extending sales it is necessary, here as well as in the United States, that energetic measures be used, and it has not always been found that foreign firms are the best agencies to this end.

NOTE CONCERNING MAPS.

Facing this page are two maps of China—the first a large, detailed map and the second a smaller one designed simply to show the existing railways of the country. Persons interested primarily in questions of railway transportation will find it more convenient to consult the smaller map, disregarding the railway lines indicated on the other, which do not correspond in all respects with actual conditions at the present time.

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